Civil Society in the Age of Automation:

Understanding the Benefits and Risks of Artificial Intelligence,

Machine Learning, and Bots

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Abstract

The next wave of disruptive technology has arrived; it is the Age of Automation. The defining technologies for this new era include robots, chatbots, artificial intelligence, machine learning, conversational interfaces, cyborgs, and other smart devices. These technologies are increasingly becoming the interface between organisations and humans. The risks and benefits for civil society organisations boils down to automation versus augmentation. Automation is where robots and algorithms take over and destroy humanity. Augmentation is more optimistic and suggests that artificial intelligence (A.I.) will help civil society organisations amplify their work to better serve stakeholders and solve significant social change problems.

Civil society organisations should not view these technologies as a smackdown between flesh and code, but as a partnership to better address development needs. Civil society can play a key role in addressing the risks posed by A.I., especially for marginalized people and communities who will feel the brunt of any negative impact. However, to reap the benefits for civil society, design and implementation must have a human-centered orientation, scale beyond the innovation or data units to entire enterprise and maintain the highest ethical standards to avoid devastating unintended consequences.[1]

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[1] Fine, Allison; Kanter, Beth. Leveraging the Power of Bots for Civil Society. (2018) Stanford Social Innovation Review Blog, April.

Why Automation Technologies Are Poised To Be Disruptive

Artificial intelligence (A.I.), machine learning, bots, and robots should not be viewed as fodder for science fiction novels but be recognized as existing technologies that are being integrated with and used in all aspects of our lives. This includes government, finance, national security, health care, criminal justice, transportation, artistic expression, and more. There are examples where A.I. is already making a positive impact on the world and augmenting human capabilities in dramatic ways, and this also includes the development and nonprofit sectors.[2]

Artificial intelligence, machine learning, bots, and robots have been in development over the past few decades. (Please note the definition of these terms at the end of this policy brief.) Several recent trends have come to the forefront that make it essential that civil society organisations consider the potential impacts of automation in their strategic plans. The trends include: 1) new, more powerful algorithms; 2) Explosion of data generated by digital technologies that surpasses the human capacity to analyze; 3) Accelerated processing power of computers; 4) Investments by private and public entities that recognize the potential value. [3]

Governments around the globe are investing in A.I., leading to what some experts are calling an A.I. arms race. One country that stands out is China, releasing an A.I. strategy in 2017 that proclaimed A.I. as an important national priority and shared the top leadership's vision for a new economic model driven by A.I.[4] Other countries, including UK, Canada, and US, are also investing in programs and economic policies.[5]

Some technology leaders are sounding the alarm bells about the potential dangers and unintended consequences of artificial intelligence,[6] based on ongoing experiments and prototypes being tested in the technology company laboratories. [7]

Many business people do not understand at even a basic level what artificial intelligence is, what it can do, and what the potential impact is for their business models. For example, 1,500 business leaders in the United States in 2017 were asked about A.I. and only 17 percent said they were familiar with it. They understood there was considerable potential for altering business processes, but were not clear how A.I. could be deployed within their own organisations.[8] The same study identified only small segments of businesses that were "cognitively aware" (those that were aware of the

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[2] West, Darrell M.; Allen, John R. How Artificial Intelligence Is Transforming Our World. (2018) Brookings Institute, April 24.

[3] Machine Made Goods: Charities, Philanthropy and Artificial Intelligence. (2018) Charities Aid Foundation, May.

[4] "A Next Generation Artificial Intelligence Development Plan" (2017) China Copyright and Media Blog, July, 2017

[5] "Nations Will Spar over A.I." (2018) PWC. January.

[6] Drum, Kevin. Why Elon Musk Is Sounding the Alarm Bells About Artificial Intelligence, Mother Jones. December.

[7] Paine, Chris. Do you Trust This Computer? (2018) Papercut Films.

[8] Cognitive Technologies Survey (2017) Deloitte.

technology but have not integrated it into their efforts) and "cognitively active," early adopters who are actively using A.I. in their business models.

The private sector is learning how to transform traditional business models into those powered by artificial intelligence and is beginning to grasp how to prepare their businesses and organisations for the Age of Automation. "A.I. Readiness" [9] considers what is needed to expand A.I. adoption at the enterprise level beyond the data science department and to the entire organisation without a lost investment or unintended consequences. The A.I. readiness framework assesses data and infra-structure but also people, ethical, strategic and practical considerations needed to integrate machine learning and artificial intelligence in five fundamental business areas: strategy, people, data, infrastructure and ethics.

Artificial intelligence is fundamentally changing the physics of financial services according to a comprehensive report published in September 2018 by the World Economic Forum. It is weakening the bonds that have held together the component parts of incumbent financial institutions, opening the door to entirely new operating models and ushering in a new set of competitive dynamics that will reward institutions focused on the scale and sophistication of data much more than the scale or complexity of capital. A clear vision of the future financial landscape will be critical to good strategic and governance decisions as financial institutions around the world face growing competitive pressure to make major strategic investments in A.I. and policy makers seek to navigate the challenging regulatory and social uncertainties emerging globally.[10]

The Need for Human-Centered A.I.

Fei-Fei Li is a professor at Stanford and directs the Stanford Artificial Intelligence Lab, and the chief scientist for A.I. research at Google Cloud. She published an influential NY Times Editorial that coined the phrase "Human-Centered A.I.," or artificial intelligence that is guided by human concerns. *"No technology is more reflective of its creators than A.I. It has been said that there are no "machine" values at all, in fact; machine values are human values. A human-centered approach to A.I. means these machines don't have to be our competitors, but partners in securing our well-being. However autonomous our technology becomes, its impact on the world — for better or worse — will always be our responsibility."*[11]

Technology ethicists are asking questions about designing automated systems: *"How will artificial intelligence and automation change the way we live and work? How can we design automated systems that help us become heroic, elevated centaurs, rather than demoralized, disposable gnomes working within the gears of an automated but inefficient machine?"*[12] Technology systems need to be

[9] Groopman, Jessica. "New Research Helps Businesses Prepare for Artificial Intelligence" (2018) Kaledio Insights, September.

[10] McWalters, Jesse. The New Physics of Financial Institutions, (2018). World Economic Forum. September.

[11] Li, Fei-Fei. How To Make A.I. That's Good for People (2018) New York Times, March 7.

[12] Case, Amber. Designing Automation Systems to Be Calm: Five Principles *(2018) Medium.* September 7.

designed to amplify the unique and beneficial characteristics of both humans and artificial intelligence. Business system designers need to carefully consider which systems should be automated, what needs to be kept human and how the artificial intelligence can augment humanity. The principles include: 1) Use the least amount of automation to get the job done; 2) Improve efficiency before introduction automation; 3) Avoid imposing automation on the wrong people; 4) Recognize that automation can never account for every real-world scenario; 5) Amplify what humans do best—and amplify what machines do best.

The ethical risks in using A.I. for social service delivery are already in evidence in this unregulated field. Woebot is a Silicon Valley-based company. It uses an online chatbot mainly through Facebook's Messenger application to provide real-time assistance to people in need of mental health counseling. Woebot has no human interaction as part of its model. The people running Woebot say that users' data will not be sold —for now. This user agreement could change without warning. In addition, users' data is already being analyzed, stored, and used by Facebook Messenger, a notoriously opaque and company-centered data platform.

Given the enormous disruption that A.I. is already having on society and across many sectors, a recent initiative of the World Economic Forum is convening global leaders to discuss and identify policies for socially responsible A.I. development.[13] Kay Furth-Butterfield of the World Economic Forum describes the ethical challenges for those implementing A.I. in four main categories: bias, transparency, accountability and privacy. There are clearly benefits to using A.I. for efforts in medical diagnosis, surgery and technologies like self-driving cars. However, the ethical challenges occur throughout these efforts beginning with human bias of coders to ethical decisions about how the technologies are used and by whom. Butterfield believes that every student trained in A.I. should also be trained in its ethical use.

Civil society organisations are being formed with the mission to ensure that the A.I. field preserves a humanistic view or has social impact. For example, AI4ALL, established by the founders of the Stanford University Artificial Intelligence Lab is a Bay Area-based NGO dedicated to cultivating a diverse group of future A.I. leaders. They work in partnership with universities, researchers, practitioners, and business leaders. With a goal to increase diversity and inclusion in A.I., they are creating pipelines for underrepresented talent through education and mentorship programs around the U.S. and Canada that give high school students early exposure to A.I. for social good. The intent is for A.I. to be developed by a broad group of thinkers and doers advancing A.I. for humanity's benefit. [14] The AI4Good Foundation works with technologists and international development initiatives on projects.[15]

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[13] WEF's Head of AI Brings Together Global Leaders, (2018) Thomson Reuters. September 11.
[14] AI4ALL http://ai-4-all.org/ (Accessed 29 October 2018)
[15] AI4Good Foundation. https://ai4good.org/ (Accessed 29 October 2018)

In January 2018, researcher and professor Virginia Eubanks published "Automating Inequality".[16] Automated systems, powered by algorithms and data, are being used by governments to make decisions that impact on the everyday life of citizens, from controlling which neighborhoods get policed, which families receive needed resources, or who is investigated for a crime. Some of the most invasive and punitive systems target people living in poverty. The book provides an in-depth analysis of algorithmic discrimination or bias that occurs with data mining, policy algorithms, and predictive risk models on poor people.

In February 2018, data scientists and other practitioners identified the need for a "Hippocratic Oath[17]" at the Data for Good Exchange conference. The ethical guidelines are in the early stage of development. Experts feel this effort needs to go beyond outlining professional conduct for data sciences to include the voices and experiences of those who face automation's most dire effects. If not, data scientists may miss the opportunity to push the field towards social justice.[18]

Social activism to shine a light on algorithmic discrimination is in the early stages.[19] For example, the Algorithmic Justice League[20] was founded by MIT student Joy Buolamwini[21] to attack the problem of algorithmic bias head on. Its mission is to ferret out and eliminate bias in the machine learning and A.I. programs that are being used not just for mundane tasks like identifying your friends in a Facebook photo, but also making life-changing decisions in the realms of healthcare, insurance, and criminal justice.

Civil Society Organisations and Experimentation with Artificial Intelligence

Civil society organisations have the potential to harness A.I. to help them further their mission, programs, communications, fundraising and internal operations. While the number of examples is relatively small, they provide a sense of both the potential benefits as well as the challenges.[22]

By far the most common types of pilots being launched by nonprofits and civil society organisations are the use of chatbots, computer interfaces that mimic human conversations.[23] This is mainly due to the availability of "bot authoring software platforms" that make it easy to create, test, and

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[16] Eubanks, Virginia. Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor. (2017) New York: St. Martin's Press.
[17] Eubanks, Virginia. Hippocratic Oath for Data Sharing, (2018) Virginia Eubanks blog. February 21.
[18] Ibid.
[19] Negron, Wilneida; Hargrave, Morgan. Why You Should Care About Bots If You Care About Social Justice, (2017) Ford Foundation. May 30.
[20] Algorithmic Justice League https://www.ajlunited.org/ (Accessed 29 October 2018)
[21] Buolamwini, Joy. How I Am Fighting Bias in Algorithms. Ted Talk
[22] Machine Made Goods: Charities, Philanthropy and Artificial Intelligence. (2018) Charities Aid Foundation, May.
[23] Fine, Allison. How Chatbots Are Helping Nonprofits Do More for Less, (2018) Chronicle of Philanthropy. March 21.

implement a bot on Facebook Messenger.[24] Since many nonprofits and civil society organisations have already invested in growing their audiences on Facebook and are successfully raising funds using Facebook's fundraising tools, this low risk approach is attractive.

A number of international development organisations are actively researching, funding, and piloting projects using A.I. through their Innovation Units. These experiments are using sophisticated technology often in partnership with a private sector company. In addition, some have experimented with investing in social entrepreneur startups using A.I. For example, the UNICEF Innovation Fund recently announced funding for several A.I., Data Science, and VR startups that will create products to help children in the developing world.[25] One of the funded projects includes games-based learning tools that utilize A.I. for customized skills development and will help children in Mexico.

Conversely, several technology companies that work in A.I. have established partnerships in their labs with social good organisations to better understand how sophisticated A.I. and Machine Learning applications can be used to help solve difficult problems. IBM has ongoing research projects in its "Doing Good in A Cognitive Era"[26] initiative, as part of its social responsibility efforts. Microsoft recently announced an A.I. and Social Impact [Initiative](#) that will help with Climate Change. Google is experimenting with A.I. as well.[27] [TensorFlow](#) is one such experiment. It is a machine learning library that has catalogued tens of thousands of birdsong recordings. These recordings were taken at 50 locations around a bird sanctuary in New Zealand known as "[Zealandia,](#)" and were part of an effort to better understand the movement and numbers of threatened bird species. It can be very difficult to make good conservation decisions because the types of birds and tracking their whereabouts can be overwhelming. This is a perfect opportunity to put an A.I.-based effort to work. A graduate student created the TensorFlow system to recognize specific bird calls and measure bird activity. But it is not just a database; it is a smart system. The more audio it had, the more it learned, and the more accurate it became, thereby enabling targeted conservation efforts.

Program Information Delivery

The World Food Program is using human-centered design methods to develop and test the use of chatbots to deliver information to refugees about its programs.[28] The "Foodbot" was conceived and developed after visits to field locations in Nigeria, Haiti, and Kenya and interviews with stakeholders. The purpose of the FoodBot was to share and receive useful information on food security with stakeholders. The bot was prototyped in the field, at the Kakuma Refugee Camp, located in Western Kenya, where WFP staff and refugees collaborated to better understand how to create a user-

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[24] Facebook Messenger Team. [Messages Matter: The Evolution of Conversation on Facebook](#), (2017) Facebook Newsroom. November 16.

[25] [Unicef Innovation Announces Funding For New Technology Projects](#), (2018) UNICEF Newsroom. April 6.

[26] [Doing Good in A Cognitive Era](#) (2018) IBM.

[27] Webster, Darryn. [Machine Learning Gives Environmentalists Something to Tweet About (2017).](#) Google Blog. November 30.

[28] [World Food Program - Foodbot](#) (2017) MVAM Blog. October 9.

friendly chatbot to meet their needs. The process includes co-creation and iteration of prototypes.

Arthritis Research UK and IBM collaborated to create a Watson-powered 'virtual personal assistant'[29] to provide information and advice to people living with arthritis. The goal is personalized information from the Arthritis Research UK website, delivered in a form that feels like a natural conversation. The service will be accessible on mobile phones and computers. Approximately 300 people with arthritis helped Arthritis Research UK to test it and provided feedback before the virtual assistant was launched publicly on the charity's website last year. [30]

Design company IDEO partnered with a public health organisation in response to the Zika outbreak in Puerto Rico in 2016-2017. Together, they created a Zikabot, a useful chatbot service that let Puerto Ricans ask anonymous questions about Zika and receive accurate and timely health information. Created as a prototype, the Zikabot showed how a simple bot could distribute accurate public health information and keep track of the top questions on the mind of the public. However uncovering the ways in which people might want to be spoken to in this kind of conversation was just as meaningful. During the testing phase, it became clear that when people were given all the facts about the virus, it dramatically changed how they viewed Zika and its impact on public health. The organisation learned that agile, iterative, human-centered design methods were critical to effective design and integration of chatbots for public health information delivery.[31]

Unicef created U-Report[32] as a platform to engage young people with goals to shape policy. Young people interact with the bots on Twitter and/or Facebook, suggest and respond to polls, and the results and ideas are shared back with the community through the web site, social media channels, and mobile phones. Issues polled include health, education, water, sanitation and hygiene, youth unemployment, HIV/AIDS, disease outbreaks and anything else people want to discuss. For example, in Liberia[33], the bot asked 13,000 young people if teachers at their schools were exchanging grades for sex.[34] Some 86 percent said yes, uncovering a widespread problem and prompting Liberia's Minister of Education to work with UNICEF on addressing it.

Museums, like International Development Organisations, have been early adopters of A.I. The San Francisco Museum of Art has 34,678 items in its collection. A patron would have to walk 121 miles to see them all! To share its entire collection with art lovers, the museum created the "Send Me" bot, which allows anyone to send a simple text message and receive a picture of a piece of art matching the idea, words, or phrase texted. The bot unlocks all of the artwork of the museum for virtual viewing by anyone, anywhere, at any time.[35] The Anne Frank Museum, one of the first museums to

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[29] Arthritis Research and IBM Launch Virtual Assistant (2017) IBM. March 14.
[30] The Arthritis Research Virtual Assistant at https://www.versusarthritis.org/about-arthritis/ (Accessed 29 October 2018)
[31] Boardman, David; Koo, Sarah. Chatbots: Your Ultimate Prototyping Tool (2016) IDEO. September 21.
[32] U-Report at https://ureport.in/ (Accessed 29 October 2018)
[33] Liberia U-Report at https://liberia.ureport.in/ (Accessed 29 October 2018)
[34] Liberia Poll at https://liberia.ureport.in/poll/286/ (Accessed 29 October 2018)
[35] An Ingenious Texting Bot from SFMOMA. (2017) Beth Kanter's Blog. July 17

launch a Facebook Messenger bot, uses its bot to engage audiences about the story of Anne Frank and plan their visit to the museum.[36]

Marketing and Communications

The Climate Reality Bot[37] is designed to educate supporters and build the organisation's email list for action alerts. Designed with ChatFuel[38], a bot authoring program, it uses close-ended options to funnel supporters to different options on the lower rungs of the ladder of engagement. The task of capturing email addresses from Facebook is completely automated and available 24/7. This is a simple way to get started using bots strategically and does not take that much upfront design time or customization. Climate Reality tracks its conversion rate to see how effective the bot has been at building its email list and early results are promising. [39]

Another example comes from a social service UK Charity, Mencap, which provides support and services to children with learning disabilities and their parents.[40] Mencap has a chatbot on its website as part of a public education effort called #HereIAm. The campaign is intended to help people understand more about what it's like to have a learning disability through the experience of a "learning disabled" chatbot named Aeren. This bot is also quite limited. It only answers questions and doesn't ask them and doesn't become smarter through interactions. However, this appears to be an effective way for people to understand the nature of being learning disabled. Mencap reported a 3% increase in awareness of the charity as a result of the bot.[41]

Fundraising and Donor Engagement

One of the first nonprofit bots was developed in 2016 by charity:water and is frequently referenced in nonprofit articles. The Yeshi Bot [42] is intended to raise awareness and increase donor engagement. Yeshi is a virtual reality image of a young girl in Ethiopia created by charity:water to educate potential donors about the six-hour walk that many girls and women make to get clean water. The conversation with Yeshi is "smart," meaning that she asks and answers questions with a variety of images, maps, text, and videos.

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[36] Anne Frank Museum Bot at https://www.annefrank.org/en/about-us/news-and-press/news/2017/3/21/anne-frank-house-launches-bot-messenger/ (Accessed 29 October 2018)

[37] The Climate Reality Bot at https://www.facebook.com/climatereality/ (Accessed 29 October 2018)

[38] ChatFuel at https://dashboard.chatfuel.com/ (Accessed 29 October 2018)

[39] Fine, Allison; Kanter, Beth. The Robots Have Arrived: How Nonprofits Can Make Sure They Save Rather Than Kill Us, (2018) Guidestar Blog. January 11.

[40] Mencap at https://www.mencap.org.uk/understandme/

[41] Here I Am Campaign at https://www.mencap.org.uk/get-involved/campaign-mencap/here-i-am

[42] Liffreing, Ilyse This Facebook Bot Recreates an Ethiopian Girl's Long Walk for Water, (2016) Campaign Live.com September 1.

WaterAid Bot[43] created a chatbot to enable supporters to experience the life of a typical fisherman and farmer in Sierra Leone named Sella. Sella becomes our guide through his remote village. We meet his wife and daughter and learn about the new water and sanitation infrastructure being built as a result of WaterAid's efforts in his village. In this way, supporters are immersed in, "some good, old-fashioned storytelling."

The Pope Bot is a Facebook Messenger[44] created by the Vatican to simulate a conversation with the Pope. The Pope Bot engages and shares stories and then asks for money by linking to a donation landing page. While it is not yet possible to make a donation from within the chat text, actually typing your credit card, this ability could lead to increased donation conversions. The Pope Bot illustrates how critical it is to ensure that the bot embodies the organisation's brand and voice as well as design for engagement.

Internal Management and Communication

A.I. is beginning to be used to manage rote tasks and create efficiencies within organisations. For instance, First Draft, a system developed by the fundraising company Gravyty, uses artificial intelligence to streamline the process of identifying fundraising prospects and doing the first outreach to them. It drafts fundraising emails and generates a weekly action plan for staff members that includes suggestions for personal outreach to donors. [45]

Bots can also break down internal barriers to efficiency and innovation. For example, Oxfam, an international nonprofit with 20 affiliates that work with organisations in 90 countries and over 10,000 employees, faced the challenge of silos in separate hierarchies, and encouraging innovation while simultaneously providing central leadership and decision making.

To help solve these problems, Oxfam created an internal suite of bots and automation tools to help alleviate rote and time-consuming tasks.[46] For example, one problem the organisation faced was that it was hard for people to share ideas and insights with workers at other Oxfam affiliates. The only tool they had was traditional email for sharing information, which required people to search thousands of files on internal drives to develop new knowledge. Bots could quickly search through all internal communication and files of all 10,000 staff members and create a new knowledge base of ideas and insights for employees to put into action. These bots are reaching across organisational departments and divisions to to create an organisational culture with common values, vocabulary, and practices.

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[43] Hobbs, David. WaterAid Chatbot Connects Supporters with Communities, (2018) Third Sector. February 1.
[44] PopeBot at https://www.facebook.com/MissioUSA/ (Accessed 29 October 2018)
[45] Martel, Adam. Meet Gravyty First Draft at http://info.gravyty.com/blog/meet-gravyty-first-draft (Accessed 29 October 2018)
[46] Oxfam: Using Custom Integrations to Revolutionize Work at https://www.facebook.com/workplace/case-studies/oxfam

In addition, OxBot is a jargon-busting bot that will tell employees what specific acronyms mean. It will even provide a link to other internal sources of information for the user to learn more about that word, it's meaning and history.[47]

Facebook is also offering a suite of A.I. powered tools on its platform called Workplace for Good for NGOs to access for free.[48] The suite includes video conferencing, bots, a news feed, and integration with Box among other tools. NGOs using this platform include the World Wildlife Fund, Comic Relief, UNICEF, Save the Children and It Gets Better.

Recommendations for Individual Civil Society Organisations

1) Understand the Adoption Trends. You do not have to be an expert in artificial intelligence or know chatbot programming code, but you do need to understand what a chatbot is and at a high level how it works.[49] More importantly, you need to understand the current usage trends. Luckily, the ICRC, together with The Engine Room and Block Party, has produced a useful report[50] on the current and potential uses of messaging apps such as Facebook Messenger in humanitarian situations.

2) Get Some Hands-On Experience with Chatbots Developed for Social Good Purposes. Visit the different chatbots referenced in this article or use this curated list that Beth put together of examples from nonprofits and beyond.[51] Try to determine the purpose and intended audience. Does the chatbot use open-ended conversation or is it close-ended? Is it complex or simple? Is it a pleasant or frustrating user experience?

3) Design a Simple Pilot. In our book, *The Networked Nonprofit,* we wrote that using new technologies is a contact sport, not a spectator sport. It's time to get in the sandbox and try it out for your own organisation. Start by determining a measurable objective. Do you want it to assist marketing in building your email list or delivery of services? Next, figure out who the intended audience might be. It will be very helpful to come up with one or two user personas and sketch out some potential conversation threads. Also determine the cost. Do you have a budget to hire a Chatbot programmer (you would need this for a more elaborate chatbot that uses A.I.), or will you use one of the free and low-cost chatbot authoring tools, like Octiveai, Manchat, or Chatfuel. (You can read more about designing a pilot here.)

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[47] Oxfam Novib Academy. The Secret Language of Oxfam Employees (2018) Oxfam Novib. March 12.

[48] Workplace by Facebook is Looking to Become a Workplace for Good at www.facebook.com/Workplace (Accessed 29 October 2018)

[49] Schlicht, Mat. The Complete Beginners Guide to Chatbots. (2016) Chatbots Magazine. April 20.

[50] Walker, Tom. Humanitarian Futures for Messaging Apps (2017) International Committee of the Red Cross. January 17.

[51] Kanter, Beth. Nonprofit and Bots: Beth's List of Bots. Beth Kanter's Blog.

4) Evaluate and Iterate. Run your pilot for a few months. Gather data against your goals. You could also survey or interview some of the people who interacted with your bot and get their feedback. Based on this initial feedback, how might you improve your bot's results? Is it ready to scale?

Recommendations for Civil Society Ethically Using A.I. and Bots

1) Create an NGO Code of Bot Ethics. This would be an outstanding job for a cross-sector organisation like Independent Sector to spearhead. A committee could be charged with answering questions such as: What are the expectations for organisations using bots in ethical ways? When should people step in to talk to users with concerns?

2) Take a Non-Manipulation Pledge. Bot usage needs to be very transparent for donors and supporters. There should be a trust badge similar to the ones in use now to verify trusted websites, to assure the public that a nonprofit is using chatbots in ethical ways. For instance, they may ask users if they want to see the organisation's 990 tax forms before asking for a donation. In addition, nonprofits using chatbots need to be sure that donors and stakeholders clearly understand that they are conversing with a bot, not a human. Most recently, California has passed a law that bots need to reveal themselves to end users.[52]

3) The Right to be Forgotten. The right to be forgotten comes from Europe, where criminals have a right to have their crimes expunged. For the internet age, the right to be forgotten is the opportunity to erase your digital footprint. It is the opportunity for anyone who engages with an organisation to ask that their interaction be permanently expunged. This is a very bold step for nonprofits that rely on expanding their network of supporters for revenue. Nonprofits have an opportunity to choose a different way to work. We can go beyond our immediate transactional needs and focus on the good of society.[53]

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[52] Malinsky, Gili. Can't spot the bot? In California, automated accounts have to reveal themselves. (2018) NBC News. October 1.
[53] Fine, Allison. How Chatbots Are Helping Nonprofits Do More for Less, (2018) Chronicle of Philanthropy. March 21.

Glossary of Terms

Algorithms: A set of rules or instructions given to an A.I., neural network, or other machines to help it learn on its own; classification, clustering, recommendation, and regression are four of the most popular types.

Artificial intelligence: The development of computers capable of tasks that typically require human intelligence. A machine's ability to make decisions and perform tasks that simulate human intelligence and behavior.

Bots: A bot (short for "robot") is an automated program that runs over the Internet. Some bots run automatically, while others only execute commands when they receive specific input. There are many different types of bots, but some common examples include web crawlers, chat room bots, and malicious bots.

Chatbots: A chat robot (chatbot for short) that is designed to simulate a conversation with human users by communicating through text chats, voice commands, or both. They are a commonly used interface for computer programs that include A.I. capabilities.

Human-Machine Interface (HMI): In HMI, the interactions are basically of two types, i.e., human to machine and machine to human. Since HMI technology is ubiquitous, the interfaces involved can include motion sensors, keyboards and similar peripheral devices, speech-recognition interfaces and any other interaction in which information is exchanged using sight, sound, heat and other cognitive and physical modes considered to be part of HMIs. Although considered as a standalone technological area, HMI technology can be used as an adapter for other technologies.

Machine learning: Using example data or experience to refine how computers make predictions or perform a task. A facet of A.I. that focuses on algorithms, allowing machines to learn without being programmed and change when exposed to new data.

Natural language processing (NLP): Natural language processing is a subset field of artificial intelligence. Natural language processing is an overarching and quite complex technology that encompasses many subsets such as natural language understanding. NLP is everything that relates to a machine understanding what a human has input. To do that, an NLP engine will use many tools like NLU, summarizing algorithms, sentiment analysis, tokenization, and more.

Robot: A robot is a machine designed to execute one or more tasks automatically with speed and precision. There are as many different types of robots as there are tasks for them to perform. Robots that resemble humans are known as androids; however, many robots aren't built on the human model. Industrial robots, for example, are often designed to perform repetitive tasks that aren't

facilitated by a human-like construction. A robot can be remotely controlled by a human operator, sometimes from a great distance.

The Authors

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The **Alliance for Peacebuilding** (AfP) is a membership network of over 100 organizations. Our members include some of the world's largest development organizations, most innovative academic institutions, and the most powerful peacebuilding groups. We bring together coalitions in key areas of strategy and policy to elevate the entire peacebuilding field, tackling issues too large for any one organization to address alone.

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