GLOBAL INFORMATION SOCIETY WATCH 2019

Artificial intelligence:
Human rights, social justice and development

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THE CARIBBEAN

"IT'S NOT JUST ABOUT PUTTING AN APP IN THE APP STORE"[1]
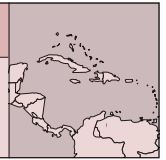
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Introduction

Is the advent of artificial intelligence (AI) the panacea for many of the ills of the developing world, or is AI a Trojan horse to facilitate invasion, the smallpox blankets of the new colonialism? The stories of the horse and the blankets exist as a part of the human story. The Trojan horse was built by the invading Greeks, and filled with their soldiers. Then the Greeks simply waited for the Trojans to come for the horse and drag it into their besieged city. Victory from inside the city walls was easy. The blankets, infected with smallpox, and offered as gifts (as the Trojan horse had been), assisted in the colonisation of the so-called "New World" by removing indigenous inhabitants who objected to the invasion. The fact that we no longer remember our history makes us vulnerable, as what happened before can easily happen again.

This report, which is based on interviews with Caribbean people, some of whom are experts in the field of information and communications technologies (ICTs) in the Caribbean,[2] will consider "artificial intelligence" in its broadest terms as the manipulation of complex databases. AI is a tool; as such it is neither good nor evil. The issues are – for what is it used? How? Why? In the Caribbean as elsewhere we need to be vigilant to answer these questions.

Informed decision making?

Since the appointment of the current secretary general, Bernadette Lewis, in 2003, the Caribbean Telecommunications Union (CTU)[3] has distinguished itself by its ability to listen and to include. Back in 2005, it was the first institutional agency in the world to hold an Internet Governance Forum. More recently, in 2016, it was instrumental in setting up the Caribbean ICT Collaboration Forum, open to all, together with the Caribbean ICT Collaboration Committee (CICC), with representatives from government, regulators, operators and civil society.

Earlier this year (2019) the CTU celebrated the 30th anniversary[4] of its founding by the Caribbean Community (CARICOM).[5] Among other activities, the CTU arranged Caribbean FutureScape, a "hands-on" exercise to expose participants to actual experience of a possible future facilitated by digital means, with the objectives, among others:

- To demonstrate the transformative potential of ICT in a futuristic "Caribbean Single ICT Space".
- To encourage Caribbean prime ministers to commit to "21st Century Government" and national and regional digital transformation.[6]

At more or less the same time came the call from GISWatch with its theme of AI.

The juxtaposition of these events created the thought that many of the experiences that FutureScape demonstrated would, in the real world, require the use of some form of AI. It also raised the questions: how much awareness exists in the Caribbean of the potential positives and negatives of AI; and are we buying into something that may be more negative than positive?

The Caribbean, in common with the developing world, has its share of problems. Many records are still generated, and stored, on paper. One of the informants for this article deplored the contribution of the continuing use of paper to poor air quality and unsatisfactory conditions of work for employees. He hoped that digitisation might solve that problem.[7] Different aspects of the citizen's life are stored in different formats in different data sets which do not communicate directly with one another, making tasks like getting a passport or starting a business onerous and frustrating.

1 Lynda Chin, vice-chancellor and chief innovation officer at the University of Texas System, quoted in AFP. (2017, 21 June). Artificial intelligence and the coming health revolution. *Jamaica Observer*. www.jamaicaobserver.com/business-observer/artificial-intelligence-and-the-coming-health-revolution_102379?profile=1056

2 I thank everyone who took time to respond to my questions. All of your answers shaped this report, although you are not all cited directly. Hopefully the discussion will continue and spread.

3 https://www.ctu.int

4 https://www.ctu.int/event/30th-anniversary-celebration

5 https://www.caricom.org

6 https://www.ctu.int/wp-content/uploads/2019/04/FutureScape_Overview-Issue-3.pdf

7 Interview with Claude Paul, General Secretary, Saint Lucia Civil Service Association, 26 June 2019.

In this situation, the possibility of "21st Century Government" envisaged by the CTU sounds like a very attractive solution. However, are there downsides, disadvantages? Are we aware of the whole picture? In fact, are the decision makers in government sufficiently aware to be able to create good policies, and to put in place the legislation and regulation necessary to make 21st Century Government truly effective?

How high a price should we pay for convenience?

Most Caribbean people agree about the advantages of AI, about the conveniences that it can provide, and that its use is inevitable. There is much less cognisance of the risks involved, although some local ICT experts are beginning to express concern. Over the last few months have come several warnings to the developing world about the need for vigilance in their approach to AI. One of the most recent was published in April this year by Oxford University Professor of Globalisation and Development Ian Goldin: "The clock is ticking and the risks posed by AI to development have never been higher. Policymakers everywhere should be listening carefully and thinking hard about how to respond."[8]

In the Caribbean, the emphasis is still on the possibility of using AI to solve developmental and other social problems. One informant suggested that a failure to apply the technology appropriately will leave us so far behind that we would drop out of sight. The same informant insisted that we must apply the technology as its masters and developers so as to avoid "forever being subscribers." We must also resist the "potential erosion of human agency."[9] We must run the technology, rather than allowing the technology to run us.

The main areas where informants perceive an intersection between "government" and AI are: data collection and management; management of the public service; energy and telecommunications; education; health care; tourism; and agriculture.

Data collection and management

Most informants commented on this issue. One response pointed to the new variations on the traditional questionnaire for collecting statistics, with the possibility of using audio recordings and

photographs.[10] There was concern over the data being collected and monetised by global tech companies like Google and Facebook. The developed world is beginning to recognise its vulnerability and build protections for itself, for example, the European Union's (EU) General Data Protection Regulation (GDPR); the Caribbean is more concerned with making itself compliant with those regulations than with protecting itself.

A more subtle difficulty, presented in an article discussing AI and health care concerns in the United States and the EU,[11] is that the data used to create the AI technology may not be representative of the population where it is being applied. In a medical context this may lead to a false diagnosis. In any context a non-representative data set is likely to lead to inaccuracies. The data necessary for the particular technology may not have been collected at all, or in sufficient quantity, in the Caribbean, and in many cases the data set from elsewhere will not enable the technology to return correct results.

Most Caribbean countries already have, or are working on, some form of ICT policy. However, AI involves particular issues, especially concerning data. Lodewijk Smets, senior country economist, and Zubin Deyal, research assistant, at the Inter-American Development Bank (IDB), Trinidad and Tobago, stated:

> AI technology comes with risks; it can potentially worsen inequality by eroding jobs through automation and redirecting profits to capital owners. Appropriate economic and social policies are therefore needed to prevent this. […] With the systematic and coordinated adoption of AI technology and the rules surrounding its uses, the people of the Caribbean would be able to benefit from this unique opportunity.[12]

Policy is needed to address data collection, to ensure that it is accurate and adequate for its purpose. One informant pointed out that "people have learned to accept that Google or Facebook make decisions (and money) on their personal data."[13]

8 Goldin, I. (2019, 18 April). Will AI kill developing world growth? *BBC*. https://www.bbc.com/news/business-47852589

9 Email from Organisation of Eastern Caribbean States Director General Didacus Jules, 13 June 2019.

10 Email from Edwin St. Catherine, Director of Statistics, Government of Saint Lucia (Retired), 13 June 2019.

11 Henderson, R., & Ross, D. (2019, 25 April). Artificial Intelligence in Healthcare: Can It Work? Perspectives from the United States and European Union. *Business Law Today*. https://businesslawtoday. org/2019/04/artificial-intelligence-healthcare-can-work-perspectives-united-states-european-union

12 Smets, L., & Deyal, Z. (2018, 20 November). Artificial intelligence and the Caribbean. *Caribbean DevTrends*. https://blogs.iadb.org/caribbean-dev-trends/en/9397

13 Email from Daniel Pimienta, former president of the Networks and Development Foundation (FUNREDES), 24 June 2019.

The people of the Caribbean also need to have their data protected, as well as to be compliant with the regulations in other parts of the world.

Management of the public service

The largest employer in many countries of the Caribbean is the government. While digitisation and AI may lead to less long-term storage of paper and a cleaner work environment, 21st Century Government tends to create redundancy. The "elephant in the room" at public discussions of the new technology is the threat of unemployment. And while there is also insistence that the same new technology will create new jobs, few details are volunteered and there is no coherent plan to offer appropriate re-training to those who may lose their jobs.

One approach to the current period of fiscal constraint is the public-private partnership. The public sector needs to have policies in place to ensure that such an arrangement does not accidentally make the private sector privy to personal information which the citizen is required to share with government agencies. One danger area for this is the concept of "smart cities", where an investment by a technology company that streamlines things like traffic, parking and rubbish collection contrives to skim off large quantities of data in the process. The Caribbean needs to begin to be aware of the hidden costs of convenience.

An area of concern for Caribbean people is the problem of political patronage. Jobs are sometimes awarded on the basis of "the party you vote for" rather than on qualifications. Assuming that the AI being used for decision making has been programmed to consider the local cultural context, using AI could benefit the Caribbean by basing employment appointments on objective values.

Supporting the benefit of AI in a customer service environment, one informant pointed to the fact that "[h]umans can sometimes over-complicate, dramatise or confuse scenarios with inaccurate explanations."[14]

The important task for governments is to do the research that will allow them to adopt the aspects of the technology that provide a public good while protecting citizens from aspects that may threaten them.

Energy and telecommunications

One aspect of AI that seems regularly to be forgotten is the dependence of the system on energy and telecommunications. The energy system still depends largely on imported fuel to keep running even if the generating company is itself local. For most Caribbean countries the telecommunications system is foreign owned, at least as regards its connection to the outside world. Most countries in the Caribbean are now sovereign states; rather than the previous dependency on a foreign government we are now dependent on the reliability of broadband and electricity, which itself relies on an external source. When the internet is down or there is a power cut many people are unable to work. This is another issue that needs to inform government policy – that AI might entail an increased dependency on technology for everyday essential functions and services, which are in turn vulnerable to the stability of both energy and telecommunications infrastructure.

Education, health care, tourism, agriculture

AI cannot and should not be relied upon to do everything. The decision makers need to distinguish between the different functions that are required, applying the technology in areas where it will be most effective.

In the area of education it is critical that local content displaying local values should be included in what is taught. However, AI has the capability to be endlessly patient with the minority of students who need extra support and explanation in a crowded classroom, and is particularly gifted at providing training to re-skill adults for other employment if they have been made redundant by automation, and in specialist training which may be unavailable locally. It also has the potential to greatly improve record keeping and data collection. The Cabinet of the Government of Saint Lucia ratified its "ICT in Education Policy and Strategy for Saint Lucia 2019-2022"[15] in February 2019. It is of some concern that this policy should make so little mention of the specific benefits and concerns of AI. In 2010 the current Minister for Education in Saint Lucia, Gale T. C. Rigobert, wrote about ICT proposals:

> Governments [...] can be inclined to fall for these schemes [...] not being sufficiently aware of the handicaps they suffer and ought to correct should they wish to benefit from the trumpeted promises.[16]

As mentioned, a main concern about using AI for health care is that it should be tailored for the

14   Email from Dwight Thomas, Business Intelligence Developer, 28 June 2019.

15   https://camdu.edu.lc/wp-content/uploads/2019/04/ICTE-Policy-Final-2019_2022-Web.pdf

16   Rigobert, G. (2010). *Bridging the Digital Divide? Prospects for Caribbean development in the new techno-economic paradigm*. Brighton: World Association for Sustainable Development (WASD).

population it is being used for. Health care also generates a great deal of highly personal data. The citizen reasonably expects the state to put in place measures to protect that data, especially since "it has been noted that medical data is now three times more valuable than credit card details in illegal markets."[17]

Tourism is adopting AI enthusiastically but with caution. The Royal Caribbean cruise line has begun to use an AI facial recognition system to speed up the process of monitoring the hundreds of passengers moving on and off their ships in the different cruise ports. The company claims:

> With this, as with its other AI initiatives, Royal Caribbean follows a model of carefully monitored, small-scale trial deployments, before individual initiatives are put into organization-wide use.[18]

Agriculture was once the main employer and income earner in the region. It was an early user of AI in the form of expert systems to communicate highly specialised information about crops to illiterate farmers. It should be noted that in the IDB Caribbean DevTrends blog post cited earlier,[19] the advantages of AI are proposed as things that could happen, rather than as things already in place.

In 2019 the Food and Agriculture Organization of the United Nations (FAO) and the Caribbean Development Bank (CDB) published the "Study on the State of Agriculture in the Caribbean".[20] David Jessop, consultant to the Caribbean Council,[21] and reviewing the report in the Cayman Compass newsletter on 16 June 2019, comments:

> [T]he report [...] says the sector as a whole has great potential for the creation of stronger market linkages with sectors such as tourism if support is provided to farmers, fisherfolk and agri-food businesses to adopt current international best practice and technologies.[22]

Attention should be paid to the conditional "if".

The absence of ICTs (including AI) among recommendations for improved communication of information and more efficient networking between the tourism and agriculture sectors suggests that the use of technologies in the different sectors is still highly compartmentalised.

However, there is reason for cautious optimism in the agricultural sector. In a guest article, "Caribbean farmers could be going digital", published by SciTech Europa,[23] Ken Lohento of the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA),[24] describes three new pilot projects using blockchain that will help to "ensure that the Fourth Industrial Revolution does not leave agriculture, and small-scale farmers in particular, behind."

Conclusion

The people of the Caribbean are a resilient people, but they are also expert at "making do". They may complain among themselves very fluently, but they are somehow accustomed to being imposed on by outsiders.

They are being told that AI is overall a good and useful technology.[25] There is very little information available about the negative side of the argument, although the Inter-American Development Bank[26] and the World Bank are beginning to advocate caution. David McKenzie, in a World Bank blog post, stresses the need to "beware of the hype" and asks, "Are we learning about enough failures?" He speaks of the "high ratio of pretty pictures to demonstrated impact," and adds: "We need to be better about also making clear when these methods do not offer improvements (or when they do worse) than current methods."[27]

People in the Caribbean, as people everywhere, have a right to be told the truth, to be offered a clear picture which will allow them to make informed decisions. They also have the right to be protected by their governments.

17 Henderson, R., & Ross, D. (2019, 25 April). Op. cit.

18 Marr, B. (2019, 10 May). AI On Cruise Ships: The Fascinating Ways Royal Caribbean Uses Facial Recognition And Machine Vision. *Forbes.* https://www.forbes.com/sites/bernardmarr/2019/05/10/the-fascinating-ways-royal-caribbean-uses-facial-recognition-and-machine-vision/#2fc51e1524bf

19 Smets, L., & Deyal, Z. (2018, 20 November). Op. cit.

20 FAO & CDB. (2019). *Study on the State of Agriculture in the Caribbean.* Rome: FAO & CDB. www.fao.org/3/ca4726en/ca4726en.pdf?eloutlink=imf2fao

21 https://www.caribbean-council.org

22 The idea is that agriculture should organise itself to supply the foodstuffs that tourism requires. Jessop, D. (2019, 16 June). Jessop: Restoring the central role of Caribbean agriculture. *Cayman Compass.* https://www.caymancompass.com/2019/06/16/jessop-restoring-the-central-role-of-caribbean-agriculture

23 Lohento, K. (2019, 13 August). Caribbean farmers could be going digital. *SciTech Europa.* https://www.scitecheuropa.eu/caribbean-farmers-could-be-going-digital/96550

24 https://www.cta.int/en

25 Ammachchi, N. (2019, 10 April). Artificial Intelligence Can Become a Game-Changer for Caribbean Economies. *Nearshore Americas.* https://www.nearshoreamericas.com/artificial-intelligence-ai-become-game-changer-caribbean-economies

26 Smets, L., & Deyal, Z. (2018, 20 November). Op. cit.

27 McKenzie, D. (2018, 5 March). How can machine learning and artificial intelligence be used in development interventions and impact evaluations? *World Bank Blogs.* https://blogs.worldbank.org/impactevaluations/how-can-machine-learning-and-artificial-intelligence-be-used-development-interventions-and-impact

They have a right to the protection of their private information. To understand how this works in the online world, they have a right to an explanation of how their privacy may be threatened.

They have a right to elect a government that works for their well-being. They have an obligation to "supervise" the work that their government is doing for them.

The suggestion has been raised by more than one informant that the relationship between citizen and state should be reviewed. The big tech companies are pushing AI. At the same time, they require the data that the technology will generate for them. If the citizen/state relationship could be improved, then there might be a chance of restoring a more equitable balance.

Action steps

The following is necessary in the Caribbean:

- Many organisations are largely unaware of the extent to which they do not know about the issues surrounding AI. It is important for those who do know to be proactive about sharing their knowledge.

- Since the people have empowered the government for their joint social good, they should ensure that the government is aware of their concerns.

- A government/civil society alliance is necessary to counterbalance the thrust of the "big tech" companies.

- Be vigilant! There seem to be areas in which AI offers a solution to the problem; however, there is little awareness among those with the problem of this possibility.

Artificial intelligence:
Human rights, social justice and development

Artificial intelligence (AI) is now receiving unprecedented global attention as it finds widespread practical application in multiple spheres of activity. But what are the human rights, social justice and development implications of AI when used in areas such as health, education and social services, or in building "smart cities"? How does algorithmic decision making impact on marginalised people and the poor?

This edition of Global Information Society Watch (GISWatch) provides a perspective from the global South on the application of AI to our everyday lives. It includes 40 country reports from countries as diverse as Benin, Argentina, India, Russia and Ukraine, as well as three regional reports. These are framed by eight thematic reports dealing with topics such as data governance, food sovereignty, AI in the workplace, and so-called "killer robots".

While pointing to the positive use of AI to enable rights in ways that were not easily possible before, this edition of GISWatch highlights the real threats that we need to pay attention to if we are going to build an AI-embedded future that enables human dignity.

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