

Keynote Presentation

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Special Session: "Smart Cities through the Lens of Human Rights:

Technological and Ethical Dilemmas"

Good afternoon and thank you for this opportunity to make some observations about the smart cities concept, through a small island developing country lens.

As we heard throughout this conference, the operating systems of society are undergoing profound transformation, including a fast-approaching future when computer chips will be near zero in cost and connected sensor devices will be widely deployed, fuelling exponential 'datafication' and the Internet of all things. Another feature of the changed society is that, even quicker than governments, technology companies are able to know our age, our diseases, our political and religious views, sexual orientation and proclivities, family, friends, associates, enemies, consumption habits - designed to benefit advertising-driven business models.

This is the background against which we are to contemplate what it means to be a smart city.

The response is a matter of perspective. The techno-rational concept which I have just described comes at a huge economic cost, estimated to be in the region of \$1.6 trillion. This is a dehumanizing and illusive universe for the vast majority of cities which cannot afford to provide even basic services much more the acquisition cost and recurring expenditure required for smart city infrastructure. This portends perpetuation and widening of the global digital divide which separates people and communities on the basis of historical inequities.

Is this inevitable or are we capable of a design which privileges humanitarian concerns over technological determinism and transatlantic dogma about how society is to be organised?

If we start from a place of equity and justice, I would argue that poverty in all forms is to the concept of smart city, what cancer is to the body. A city cannot be smart if it is not humane. It would be a susceptible city, not a smart one or more euphemistically, a smart city with a stupid outcome. This is not to say technology is not of great strategic benefit but that it is not deterministic.

If we liken a city to a person then no two cities should be expected to have exactly the same traits. So, for example, the City of London, England and the City of Kingston, Jamaica should not be judged by the same standards if we treat smartness as a City's character trait. Colonial slavery shaped modern London. Researchers have revealed its antecedents in slave ownership and as the centre of

an economic system built on Caribbean slavery. The City of Kingston is, today still wrestling with that legacy of plunder and remnants of colonial dysfunctionality.

Professor Hillary Beckles, Vice Chancellor of the University of the West Indies, and Chairman of the Caricom Reparations Commission, in an address to the British House of Commons, said: "Jamaica, Britain's largest slave colony, was left with 80% black functional illiteracy at Independence in 1962." He has otherwise remarked that no country with 80% illiteracy can develop in 50 years, and for that reason and more the British Parliament owes the people of Jamaica an educational and human resource investment initiative.

No reasonable person could argue with that premise, as we would not, the premise that smart people should be a precursor to smart cities because it has been found that "even in developed countries, citizen awareness of smart cities is remarkably low."

Talk of chips and sensors must, therefore, be subordinated to making citizens 'smart', by which I mean digital and media information literate citizens.

Let us be reminded of the UNESCO definition of Media and Information Literacy: it is "a composite set of knowledge, skills, attitudes and practices that allow people to effectively access, analyse, critically evaluate, interpret, use, create and disseminate

information and media products with the use of existing means and tools **on a creative, legal and ethical basis**".

Admittedly, this is more difficult than meets the eye. The concept of digital literacy becomes particularly challenging because the Artificial Intelligence operating systems that are being deployed, operate as a black box – opaque, evolving, untraceable and understood by very few. This is one of the most pressing ethical concerns in our transition to a world in which people are developing deeper and closer relationships of trust with 'smart' devices that are controlled by artificial intelligence.

This suggests a need for a 'new/digital Media and Information Literacy' framework, designed to include updated competencies and working knowledge of AI, the management and use of big data, the internet of things, AI ethics, AI governance, machine rights and other fourth industrial age technologies such as 3D, augmented reality, virtual reality and the cloud. Exposure to and an understanding of these issues is critical to the shaping of the digital citizen and their ability to play a full role in society, particularly, in a smart city.

With this in mind, the Broadcasting Commission is currently Working with Mona School of Business and Management, Slashroots Foundation & UNESCO, to establish a Digital Media and Information Literacy Skills Framework for Jamaica. The outputs will include tools for assessing and eventually certifying Digital Literacy, and

recommendations for the creation of a national digital literacy policy which will include setting and monitoring targets in relation to education, training, employment, digital safety and media literacy.

The Broadcasting Commission has also spearheaded the Caribbean AI Initiative, which is a collaborative project with the UNESCO Cluster Office for the Caribbean and supported by UNESCO's Information For All Programme (IFAP). Under the auspices of the Caribbean AI Initiative, we have developed the Caribbean AI Roadmap which is based on 6 principles: Resiliency, Governance, Transformation, Upskilling, Preservation and Sustainability. This translates into a focus on cooperation, human rights and sustainable development. It will be offered as a guide for the Small Island Developing States of the Caribbean in using AI to support their transition to digital economies and societies.

[Find out more at ai4caribbean.com].

As Small Island Developing States, we in the Caribbean cannot afford to ignore lessons from ancient history. The author of "Four Lost Cities," tells us that ancient city leaders, like their contemporaries, "...often want to invest in "beautiful spectacles," at the expense of real needs. The smart city narrative comes with a similar risk.

Now, I told you about Kingston's legacy of slavery and colonialism. But there is another reality. The City of Kingston has the distinction of being conferred with the global designation as a UNESCO

Creative City of Music. UNESCO has also designated Reggae Music, innovated in Kingston, Jamaica, as an "intangible cultural heritage of humanity." The City of Kingston, and Jamaica as a whole, has a global cultural footprint that bears no relation to size, age and economic ranking.

We have gifted the world a religion, Rastafarianism; Bob Marley, whose album "Exodus", was named album of the 20th century by Time magazine and whose song, "One Love", was named the best song of the 20th century by the BBC; We have gifted the world 7 genres of music (mento, ska, rocksteady, reggae, nyabinghi, dub music, dancehall, reggae fusion and related styles including afrobeat, reggaeton, and hip-hop).

It has been posited that in the global circulation of music, Jamaican music is matched only by American and British pop. It is written that "A country that can hardly be seen on the world map is part of the story of every major musical genre developed since the '60s". It has gifted the world with the fastest women and men Usain Bolt, Asafa Powell, Shelly Ann Fraser Pryce, Elaine Thompson (multiple Olympic and world champions; and several larger-than-life progenies such as Harry Belafonte, Marcus Garvey, the late Secretary of State Colin Powell, Malcolm Gladwell and countless others.

It is in this area of cultural and creative industries that it would be smartest to apply smart technology than to uproot services which

a dumb city can perform smartly, such as to organise people to separate and put out their garbage for pickup by gainfully employed garbage collectors than to invest in smart trucks and smart bins outfitted with sensors and batteries. Surely, it would not make Kingston smarter if it were to deploy a lot of smart technology but was experientially 'synthetic'.

I will shift from culture and turn next to the right to good governance, which is derived from the norms of contemporary international human rights law. In any concept and design of a smart city we must take account of what the UN Secretary General describes as a 'trust deficit disorder' which is afflicting the world. We have seen this in the riot on Capitol Hill and playing out now with tech companies that are no longer trusted to draw our social boundaries. This notable decline in trust in public institutions will, over time, if unchecked, undermine the basis for shared values and tolerance in society.

The dilemma is worsened by a "conceptual vacuum". In the old world, the citizen could rely on the UN Declaration of Human Rights (1948) as a certain basis on which to demand that his/her rights to freedom of liberty, expression and conscience be upheld. But those rights were never contemplated for the "virtual person", a phenomenon made possible by the Internet. The central question now is whether the new "e-citizen" can insist on those rights across electronic borders and via legal systems that were intended for localised solutions.

What is the 'nature' of this e-citizen, his/her e-rights and the jurisdiction to which e-government will be applied? What rights will constrain the city state when everything that is needed to be known about a citizen can be accessed electronically and remotely?

These are not just technological choices, they have profound implications for our future and we must engage fully with those issues before plunging into a 'technological abyss' in the pursuit of smart cities.

There is as yet no common agreement as to how to draw the ethical boundaries, or who should draw them, who should apply them, who should enforce them and how they should be enforced (whether by way of soft law or hard law). But, it is evident that the design of smart cities requires a multi-modal approach, involving actors across all vectors of the digital ecosystem.

These actors will be policy makers, regulators, platform operators, intermediaries, content creators, aggregators, users and civil society. The design must be evidenced-based, culturally relevant and apply rules that function in an 'all of society' and ethically pluralistic manner. This must include a response to the real fear that smart cities will expand the capability of technology companies to scrape vast amounts of valuable data that can then be used for marketing or even to manipulate people's behaviour and choices.

I agree with Zaheer Allam and Peter Newman who warn against the growing popularity of corporate-led Smart Cities where the prime focus is on profit, with little room for ordinary people to participate in the smart development and governance of the city. I would add that if a smart city is synonymous with **Plutocracy**, there is nothing smart about that outcome.

So, we must coalesce around a human-centric approach encompassing the themes of “privacy, accountability, safety, security, transparency, explainability, fairness, non-discrimination, human control of technology, professional responsibility, and promotion of human values.”

I want to conclude with two specific recommendations. The first, is that we should explore the establishment of Data Trusts as a tool for data governance. By this I mean that governments should introduce legislation requiring companies to access and use the public’s data by negotiating with data trusts that represent the interest of data subjects generally or in specific circumstances. It is time for us to accept that if data is the new oil then the data subjects should be the oil barons.

This idea is foreshadowed in the recently drafted Caribbean AI Road Map which calls for the Caribbean islands to manage data assets through aggregated data banks and regional tri-level data management infrastructure to capture, classify, clean, format, store, analyze and archive data.

I also suggest that the law should impose fiduciary responsibilities on platforms as a solution to the information asymmetry and power imbalance between platforms, governments and users. We can model other relations of power and trust such as lawyer/client, doctor and patient, where the fiduciary has an obligation to protect the interest of the vulnerable party.

My broader point is that legislation, policies and regulations which were designed in a bygone age are now mostly unsuited to support a transition to a digital society. We need new frameworks, including socio-technologically focused and culturally relevant laws, policies, guidelines and regulations.

There is no question that the future will be different, but it has not yet been cast in stone. It will be shaped by opportunity, volatility, uncertainty, complexity and ambiguity. We have been propelled to an existential crossroads and will have to choose, as Carlos Moreira and David Ferguson observe in their book, "The transHuman Code", between building a better future with the help of technology or building a future with better technology at the expense of much of humanity.

We face these profound choices and difficult decisions with the humbling knowledge that this is not the first time in human history when technological innovation has driven societal transformation, on a grand scale. In the decades between 1850 and 1870, for example, the invention of dynamite, the railway, sewing machines,

the laying of the transatlantic cable, improvements in agriculture and advances in surgery and anaesthesia changed lives and destinies. But, during the same period, we developed advanced guns, shells, long range artillery and modern warfare.

We should also recall that in 18th century Europe, the *robot* conjured a dystopian experience for human beings. *Robot* was the name of an exploitative and oppressive feudal labour service. It fomented revolution until the masses were freed from it in 1848.

So, humanity has always faced choices; we can only hope that we will choose our path wisely and that our concept of 'smartness' in the design of modern cities will be such that the smart city is like a tide that lifts all ships.

Thank You

About the Conference

The **IEEE International Symposium on Technology and Society** (ISTAS) is the flagship conference of the IEEE's Society on Social Implications of Technology (SSIT). ISTAS is a multi/inter/trans-disciplinary forum for engineers, policy makers, entrepreneurs, philosophers, researchers, social scientists, technologists, and polymaths to collaborate, exchange experiences, and discuss the social implications of technology. Hosted by the University of Waterloo and University of Guelph (Ontario, Canada), **ISTAS21** ran from **28-31 October**, and was conducted virtually.