

# Information coloniality in regional conflicts

## Decline in ethics: A precursor for information colonialization

Dr. Tamaro Green, TJG Web Services

**Abstract:** In environments where resources are constrained, technology can provide a tool for supporting governance. Technology is able to provide some conveniences to citizens of a government in that it facilitates communication services. However, technology also has the potential to provide dangers to the governance of a society (Eliassi-Rad et al., 2020). This policy recommendation is that technology in a resource constrained environments plays only a limited role in supporting municipal institutions. The environmental impact of technology should also be considered in a resource constrained environment.

### 1. Introduction

Information colonialization is a phenomenon that requires observation with new research methods. Abebe et al. (2021) provide an innovative research strategy for identifying applications of machine learning and data science on the continent of Africa. Their research combines both a historical perspective on the dynamics of African storytelling and how it can apply similarly to the data stories of data visualization. Abebe et al. (2021) are able to demonstrate that the African stories are able to provide the conceptualization of points of views analogous to how charts and graphs provide convincing. The procedure of African storytelling to persuade an audience delivers some key advantages in that the model and simulation of what can occur in data sharing contexts is visualized through the stories.

This mode of research may emerge as a new form of research design. Abebe et al. (2021) illustrate their arguments through the fiction of African storytelling. African storytelling has long been a form of providing morals and norms through the characters and events of African stories. African storytelling has been a tool for providing children

with lessons learned from the events of fictitious characters. Abebe et al. (2021) bring these stories to the realm of data stories, a technique that data scientists employ for data visualization.

Abebe et al. (2021) develop a phenomenological qualitative approach of combining interviews with storytelling to provide insight into a realm of data science that is largely ignored. This emerging research mode could avoid a large array of problems for the field of data science when planning international data sharing strategies. This emerging research mode may guide data scientists in navigating culture and norms when developing projects that involve data sharing.

With data science becoming a standard tool to apply in many fields, the transition from nascent to established research is consistent with new fields of science. Narratives and Counternarratives on Data Sharing in Africa, *Counternarratives*, suggest that a new research methodology can complement qualitative research techniques. *Counternarratives*, explores the possibility of expert interviewees providing testimonials as fictitious examples to give character to their explanation of areas of science. The ability to provide examples through storytelling can also be supportive to mixed methods research. Explanatory or exploratory research can include a story telling approach to support the qualitative component of mixed methods research. Expert storytelling may sometimes be a more informative process than open-ended interview questions. Storytelling may challenge the researcher in identifying themes among the interviewee stories. Abebe et al. (2021) , in *Counternarratives*, provides an excellent example of themes that could be sown through the analysis of storytelling research. The storytelling research approach could establish itself as a methodology for exploring the border of technology and culture.

Narratives and Counternarratives on Data Sharing in Africa, *Counternarratives*, presents some alarming conditions for which data sharing should be evaluated. Data sharing is often promoted as necessary to advance the field of data science. Abebe et al. (2021), in *Counternarratives*, present examples for which data sharing can have dangerous effects such as the production of inaccurate data, lack of infrastructure for accurate data, or the sharing of data from perspectives not local to the source. *Counternarratives* alerts researchers of how private companies, non-government organizations, and government agencies can be involved in projects for data sharing without comprehensively responding to the geological landscape, cultural norms, or municipal architecture of a location. The cooperation between the source of the data and the data collectors may need to be a new source of consideration for the institutional review board to enforce requirements for research.

The storytelling of Narratives and Counternarratives on Data Sharing in Africa, *Counternarratives*, may be integrated into ethnographic, phenomenological, or action research of qualitative research. Storytelling can support ethnographic research by allowing for research subjects to describe the experience of a demographic group through the telling of stories. The researcher could then categorize the research with themes from the stories. Abebe et al. (2021), in *Counternarratives*, provides an example of how a phenomenon can be illustrated through the telling of stories. The data illustration of *Counternarratives* allowed subject matter experts to detail a canvas of issues in data sharing projects. Storytelling may also support action research. Compelling data illustrations can be beneficial to both the research subjects and the researchers for a number of reasons. Data illustration can be published as a new form of media or can market a strategy. Data illustrations could also reduce the resources necessary if the objectives can be achieved by the same as applying strategies based on technological resources.

The storytelling of Narratives and Counternarratives  
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on Data Sharing in Africa, *Counternarratives*, may provide an opportunity to evaluate new modes for assessing the quality of data sharing initiatives. Abebe et al. (2021), explain how the oral tradition in Africa presented a means for delivering information. One example of storytelling from the African tradition is the story of the spider. In the context of data sharing a story of the spider can be similar to the following:

One day the spider was walking down the road and met the lion.

Spider: Excuse me Mr. Lion I am walking down the road and you are in my path.

Lion: I will not let you pass, not unless you give me your data.

Spider: Please Mr. Lion, let me pass so I can be on my way.

Lion: I will not let you pass until you give me your data.

Spider: Ok, Mr. Lion, I will give you my data, but let me gather it all together so I can give it all to you.

*Spider pretends to be working on his mobile device and it goes into the evening.*

Spider: Ok, Mr Lion, I have all my data ready to give to you.

Lion: Good, give it to me.

*Lion takes the data but it is late in the evening and the Lion is sleepy. The Lion takes the data but falls asleep. When the Lion wakes, the Spider and the data are gone.*

Outside influences continue to influence the nation-state building of Horn of Africa countries and may occasionally contribute to conflicts (International Crisis Group, 2019). International Crisis Group (2019) explains how Gulf Nations and China have political commercial interests in the Horn of Africa adding risk to the fragile formulation of nation states. The nations of the Horn of Africa continue to progress in the formation of political and municipal strategies (Osei, Akinochi, & Mwombela, 2020; Zeleke, 2018). Zeleke (2018) evaluates the energy options for the nations of the Horn of Africa. Osei et al. (2020) suggest classifying democracy

and autocracy as well as personalist and party-based regimes for constitutional governments.

Amidst world conflicts, the support of peace and stability in the Horn of Africa is essential to the stability of the region. Henneberg and Stapel (2020) highlight the January 2020 meeting of the heads of state in the Horn of Africa as a step towards cooperation between leaders of the region. Henneberg and Stapel (2020) also describe the security risks that threaten this cooperation. Twagiramungu, Duursma, Berhe, and de Waal (2019) provide a quantitative analysis of conflicts in the region and their influences. Ndahiriwe (2021) details an example of how citizens can be involved in the mitigation of conflicts. Chabikwa (2021) develops a conceptual framework for understanding security that combines feminist theory and post-colonial theory.

Williams (2017) explains that the conflicts since around 2010 have been primarily of two types, state conflicts and conflicts of marginalized sections of society. Dave-Odigie (2011) suggests that large native involvement, disarmament, demobilization, and reintegration programs can be part of conflict resolution for Somalia. Weber (2020) explains shortages in medical care and equipment in the Horn of Africa that are being exasperated by the pandemic. Griffith, Pius, Manzano, and Jost (2020) describe logistical, financial, and organizational public service delivery challenges for pastoral communities during the pandemic.

Teshome (2019) explains that Ethiopia is considered to be a regional leader in the Horn of Africa. Le Gouriellec (2018) suggests that Ethiopia seeks a leadership role in the region. Teshome (2019) considers positive developments for peace in the region to include stabilization of governments in Somalia, Somaliland, South Sudan, and Eritrea. Teshome (2019) highlights the contribution of Ethiopia in leading peace in the region through regional and international organizations. Mehretu (2009) suggest a shift from partisan to neutral central state governance to coordinate cultural, economic, and geographic objectives of communities to benefit the nation.

## 2. Review

Regional conflicts in a world of information colonialization seek strategies to promote harmony with humankind and the environment. Snyder (2019) explains how literature reviews can build the foundation for future research and theory. Buitrago R and Barbosa Camargo (2021) suggest theoretical approaches for understanding the relationship between institutions and international competitiveness can include social capital theory, resource environment, and competitive productivity. A research strategy that may advance investigative journalism is the literature review (Snyder, 2019). The meta-journalistic literature review combines emerging fields of journalism to understand the phenomena of information colonialization.

Vogiazides and Mondani (2020) explain governments-led dispersion of refugees seeking asylum is becoming a permanent condition. Debele (2018) explain the inclusion of local communities is necessary for architecting roadmaps towards peace and security in the Horn of Africa. Schilling, Opiyo, and Scheffran (2012) study the motives behind livestock raiding among pastoral communities.

Bauer et al. (2021) compares the military conflicts to the COVID-19 pandemic for harnessing challenges to wildlife conservation in the Horn of Africa. Idowu and Lasisi (2020) explain how changes in coastal areas of the Horn of Africa due to urbanization may have an effect on the availability of fresh water. Kabiru, Izugbara, and Beguy (2013) explain rapid growth in urbanization rate in Africa to lead to health problems such as increased hypertension, obesity, and psychological issues among younger populations.

Boerma et al. (2019) describe the negative effects of armed conflicts on the children and reproductive health. Lindvall et al. (2020) also advise food insecurity as a potential contributor to violence in the region. Sasson (2012) explores food insecurity throughout the continent.

Eyilet and Senishaw (2020) explain precise locations of borders as primary sources for conflicts in some regions of the Horn of Africa. Mengisteab (2011) proposes mediation through regional organizations that have independence from member governments to border conflicts in the Horn of Africa. Mengisteab (2011) explains effective democratic governance in the Horn of Africa will rely on institutional transformation to include marginalized societies.

Donaldson et al. (2020) explains the influence that the Soviet Union had in shaping the policies of governments in the Horn of Africa during the Cold War. Abdilahi (2019) refer to trade deficits and debt to contribute as well as changes in geological environment and climate as contributions to conflicts and crises in the Horn of Africa. Marigat, Nzomo, Kagwanja, and Kiamba (2017) compare military size, military budget, and balance of powers for countries in the Horn of Africa.

Adongo, Awobamise, and Chidiebere (2018) proposes peace journalism versus traditional journalism to mitigate land conflicts in Kenya. Adongo et al. (2018) explain that urbanization and mechanized agriculture are contributors to land conflicts in Africa. Adongo et al. (2018) also claim that the lack of reliable news media can lead to conflicts when people are given inaccurate information through technology. The promotion of women to assist in resolving conflicts may also contribute in peace journalism (Odary, Komba, & Nyamato, 2020). Odary et al. (2020) note that women also participate in pastoral communities conflicts. Odary et al. (2020) explain that women in the Horn of Africa play a critical role in diffusing the vicious and violent cycle of conflict in pastoral communities.

Mengistu (2015) examines the economic, resource, historical, and cultural causes of the conflicts in the Horn of Africa. Yiallourides and Yihdego (2019) suggest justice should be sought when seeking peace and stability to the region and an assortment of influences should be evaluated as contributors to conflict. Rodt et al. (2017) compare conflicts in the Western Balkans to conflicts in the Horn of Africa.

With the role of digital media in informing of regional conflict, it may be necessary to explore how information contributes to conflicts. Information coloniality represents how information can be a tool that provides a catalyst to the fuel of regional conflicts. Vora (2020) mentions the newly released book *Technoprecarious* to explain how divisions in health and wellness continue even with advances in other areas of society. Desta (2018) reviews digitalization in the Horn of Africa and the digital divide in Africa. Mkutu (2001) suggested that improving the quality and accuracy of the media can contribute to reducing violence among other proposals. Stockton (2012) suggests the theory that foreign industries can collaborate for economic growth with the large populations of pastoral communities in the Horn of Africa may be too idealistic. Güneralp, Lwasa, Masundire, Parnell, and Seto (2017) explore the effects of urbanization on the geological environment in Africa. Meaza (2019) explores ways in which policy makers can harness the tools of information to support governance and planning.

Information colonialization is very evident with the employment practices of information technology platform monopolies. Boles (2014) lists examples of corruption as fraud, money laundering, illegal cartels, misstating financial statements, bribery, and exacting undue influence. Disconnect between policy and procedure in the labour market can impact many areas of society. Bouchard, Kohler, Orbinski, and Howard (2012) explain that corruption in health care may reduce access to adequate health services.

The policies that have been put in place by laws and regulations may often be completely ignored in employment practices. Without proper oversight, a disconnect between law and practice, widens opportunity gaps for affected populations. Many times, the only way of observing a violation is by a whistle blower or through legal action. Without adequate reporting requirements, employment laws can be largely ignored. Even when violations are identified, the civil penalties for violating labour laws are minimal losses for violators. This

disconnect in itself creates new policies for which these measures can largely be ignored.

A sense of balance in a workplace environment is not an easy achievement. To have balance, it may be necessary to make some initial sacrifices that rely on training employees to be able to interact with each other constructively. In technology, where most of the interaction takes place through digital devices, human interaction is sometimes counter intuitive to the binary world of 1's and 0's. In mathematics, there is what is called an imaginary number. Imaginary numbers in mathematics are necessary to represent certain areas in the range of numbers that cannot be expressed with finite numbers. The technology workplace is a finite area that may require infinite representations in order to achieve balance. This representation may be better suited for theory rather than finite numbers or simulated models. The theory that every possible representation could exist in a workplace is realistic. However, when asked for numerical representation this realistic theory appears to be a difficult task. The theory does not have to be represented by exact finite representations, but an expression of an effort to achieve this can be developed to show that reaching this limit is possible. Achieving balance in the technology workplace is not a numerical accomplishment but a theory when put into practice, a magnificent achievement.

Kunelius (2018) explains the opportunity for journalists to cover a new field for society in climate change. Singer (2010) reviews the economic, organizational, narrative, and relationship structure changes in the field of journalism. Sharif and Medvecky (2018) evaluates the challenges for environmental journalists in environments where a majority of the news is political coverage. Owens (2015) emphasizes the importance of teaching traditional news standards and values in journalism education in the digital age.

### 3. Methodology

Perreault and Vos (2019) explain meta-journalistic discourse to be a discussion among journalists about

journalism. Investigative journalism seeks to identify effective solutions through the field of journalism. These solutions may also benefit the field of journalism by providing research for which emerging techniques are adequate for the new digital media environments. Meta-journalistic reviews offer new tools available to replace or coincide with existing journalistic methods. Appelgren and Lindén (2020) identify emerging journalistic forms such as robot journalism, automation of common tasks, and entrepreneurial journalism, technology for self-promotion, to challenge the field from within the field of journalism. Some of the emerging tools may be detrimental to the field, however, the comprehension of their existence can be valuable to meta-journalistic reviews. Appelgren and Lindén (2020) suggest that traditional journalists may benefit from understanding the environments of digital media organizations.

Investigative journalism may be a beacon for advancing human rights in society (Bacon, 2011). Bacon (2011) proclaims that investigative journalism is a critical resource for democratic societies. The tools of social media may also contribute to investigative journalism (Gearing, 2014). Gearing (2014) describes a network society which grew from the universal connection of social media and enabled a role investigative journalism. The meta-journalistic review seeks emerging research to identify themes of information colonialization.

Ethical challenges that may arise in investigative journalism include transparency and navigating conflicts that may arise from technology (Gehrke, 2020; Kulzhanova, Kulzhanova, Mukhanbetkaliyev, Kakimzhanova, & Abdildina, 2020). Gehrke (2020) identifies in a study, the connection between transparency and objectivity may not be adhered to as much in journalism as it is in academia. Kulzhanova et al. (2020) explain a conflict in the invention of technology between the comfortable artificial environment and the negative impact on natural and socio-cultural processes. Immersive journalism may also raise concerns for authenticity and accuracy (Sánchez Laws & Utne, 2019). Sánchez Laws and Utne (2019) discuss some of the

ethical issues that arise with the development of immersive journalism.

Data-driven reporting may introduce new strategies for meta-journalistic reviews (De-Arteaga & Boecking, 2019). De-Arteaga and Boecking (2019) apply temporal trends and spatial-temporal anomalies for data-driven investigative reporting. Coddington (2014) examine three data-driven journalism practices of computer-assisted reporting, data journalism, and computational journalism. Coddington (2014) explains computational journalism as technologically oriented journalism which can often employ automation processes and algorithms. Natural language processing enhances language capabilities of data-driven reporting (Wiedemann, Yimam, & Biemann, 2018). Wiedemann et al. (2018) explain natural language processing libraries to support the analysis of heterogeneous data sources in investigative data journalism. Data-driven reporting has many applications such as measuring nationalism by social network analysis (Sari, Ahmad, Hergianasari, Harnita, & Wibowo, 2021).

Digital journalism as an emerging field brings new modes of publishing. The field of data analytics provides tools such as interactive charts and graphs that are a part of data visualization. Journalists have combined journalism and data visualization to present a new form of media in data journalism. Advanced approaches to the analysis of data which allow for analysing data from different data sources may add a new layer of how data journalists present information. The ability to analyse complex data sets leaves the opportunity for a new form of data journalism, investigative data journalism.

A meta-journalistic review may integrate with emerging journalistic practices such as social journalism and semantic journalism (Panagiotidis & Veglis, 2020; Posetti, 2013). Posetti (2013) describes investigative journalism that embraces social media as social journalism. Panagiotidis and Veglis (2020) term semantic journalism from a combination of the semantic web and new trends in

journalism. Panagiotidis and Veglis (2020) describe the purpose of semantic journalism is to incorporate emerging workflows to serve journalism in research, data collection, edit, and verification processes. With emerging journalism, consideration for challenges in journalism may alleviate some of the risks (Cushion, McDowell-Naylor, & Thomas, 2021). Cushion et al. (2021) explore the growth in mistrust of mainstream media and professional journalism by the increasing reliance of alternative media.

A meta-journalistic review may at times be required to navigate information in a foreign language or communicate in foreign languages. The learning of foreign languages may be assisted through technology and emerging strategies for learning languages (Desoyo, 2021; Ta'amneh, 2021). Ta'amneh (2021) identified that university students found advantages through learning foreign languages through their smartphones. Desoyo (2021) detail the technique of code-switching for learning languages with grammar translation. The learning of languages may also assist in facilitating understanding of cultural situations for investigative peace journalists (Deutschmann & Steinvall, 2020). Deutschmann and Steinvall (2020) suggest language research for raising awareness about how language can be a vehicle for prejudice and bias. Hoffmann, Brunner, and Horsch (2020) discover new phenomena in the English language through the analysis of large corpuses. Schnur, Cambly, and Rubio (2021) research lexical complexity and writing proficiency through the analysis of a large corpus.

#### 4. Findings and Discussion

Many of the stories from the African oral tradition can represent topics in the data sharing context. Traditional stories from around the world can be represented in this manner. The platform monopoly is becoming a familiar story of the technology industry. The information monopoly becomes an information colonial power. The platform monopolies have increased to tremendous sizes which allowed them to resource information to

colonize entities from companies to nation-states. A platform monopoly may act no different than existing monopolies in terms of taking every step possible to ensure a hold on power even at the risk to the consumer. The unlikeliness that a platform monopoly would submit to other practices than it does for other monopolistic practices also remains a possibility. One of the dangers of platform monopolies is that it reduces opportunities for objective journalism. Competition between the information of ideas is the evidence of an industrialized era.

Information colonial powers also have the ability to restrict innovation. Information colonial powers decide the new features of their platforms. The complication of new features may often create non-function of technological devices. An abundance of features may also hide improvements made to existing features. The care that should be taken to not disrupt the consumer with new features, that are many times unwanted but often provided, should be extreme as to ensure that both new and existing consumers can enjoy a product. This should especially be the case when consumers are not allowed to decide if the feature will be added to the product.

Technology has provided opportunities for communication that may be a factor towards the instability of democracy as an institution (Eliassi-Rad et al., 2020). Eliassi-Rad et al. (2020) explore the features of a democracy in the representation of a complex system. One representation of democracy could be freedom of speech or equity of access. Technology may provide tools for measuring or improving access to information. Abebe, Kleinberg, and Parkes (2016) provide a mathematical solution to improve the cake cutting algorithm to allow for fair divisions of unequal parts. The ability of technology to provide resources for examining the view of democracy can also be a vice in causing the instability of democracies. Wiesner et al. (2018) describe a trend towards instability of democracies that is due to factors such as social inequality, financial crises, and disconnected information flows. Abebe et al. (2020) explains

processes for which technology can be a vehicle for social change. Bender, Gebru, and McMillan-Major (2021) alert us to some of the dangers of technology without oversight.

One of the dangers of technology is the opportunity for companies that control technology to become business monopolies (Hovenkamp, 2020). Hovenkamp (2020) describes how the originality of digital platforms makes them difficult to regulate under antitrust laws. Monopolies may have a detrimental effect on economies by presenting a risk to innovation and entrepreneurship (Sokol, 2019). Wiesner et al. (2018) describe how economic stability can be representative of a democracy. Leitão and Ferreira (2021) explain that improving employment is only an initial stage of improving an economy.

Eliassi-Rad et al. (2020) suggest that more research should pursue the potential backsliding of democracies. Wiesner et al. (2018) explain lower educational performance as an indicator for greater inequality. Cohen, Amarasingham, Shah, Xie, and Lo (2014) explain that educating consumers reduces liability in legal and ethical concerns of technology. Brown, Guin, and Morkoetter (2020) also include in their study education demographics for how people react during financial crises. Wiesner et al. (2018) describe how the lack of participation of researchers can contribute to financial crises.

The backsliding of democracy may fuel a return to colonialization. With large companies having majority shares in many consumer product markets, antitrust regulation may be difficult to enforce in emerging digital platforms. Curran (2016) argues that antitrust laws do not provide adequate protection from the increased size of corporations nor increase wealth distribution. Basu (2019) explains that the technological revolution makes it more difficult for traditional laws to apply to product and labour markets. McAfee, Mialon, and Mialon (2005) suggest a model for analyzing conditions for the effects of competitiveness for antitrust enforcement.

Ethics in management may be a formidable

component of alleviating corruption in governance. Puiu and Ogarca (2015) describe a lack of implementation of ethics management to be a component leading to corruption. Herrington and Coduras (2019) describe corruption as a component inhibiting entrepreneurial opportunities for small businesses. Oye (2013) discusses ways that information communication technologies can curtail corruption in government such as by publicizing information, providing monitoring, and sharing data. Omar Bali (2018) studies ways that technology can be implemented to combat corruption by reducing nepotism, preventing abuse, increasing productivity, and increasing justice.

Organizational change and organizational culture are areas that can be improved in technology workplace environments. A wide assortment of training available for practicing organizational change and organizational culture are available, demonstrating availability for organizational leaders to pursue these areas if so chosen. Though the training is available, the best methods to implement the training may be an item for review by corporate leaders. When this training is delivered by an outside party it is not as effective as when organizational leaders participate in the delivery of this training. Corporate leaders may demonstrate that they are actively seeking to develop organizational change and organizational culture when they not only participate in the delivery, but also complete the training. This demonstrates to employees that they are not just checking a box, but are truly interested in advancing these principles as part of corporate standards. Organizational change and organizational culture are not areas that can be developed from the outside, but must be developed within, starting at the top.

Human resource management should provide a risk assessment of their approach to executive leadership as part of strategy planning. To mitigate the risk of policies enacted by the human resource department in an organization, human resource management departments may detail a risk analysis of their policies and procedures to provide executive leadership the ability to review the risk that these

policies can have to the brand of the organization. The brand of an organization can have significant damage if strategies are not placed to prevent human resource management departments from making decisions that result in chaotic conflicts that cannot be subsided in the media. Human resource decisions may be the most difficult to navigate because they often rely on information about situations that are not readily available. The brands of organizations that continue to receive media attention because of harsh workplace environments or events may provide a difficult damage assessment in the near future. To prevent human resource management disasters, executives may require risk assessments of what actions will likely result in a media frenzy over employees or former employees reporting on harsh workplace conditions.

Emerging trends in computer science research are troubling because they reflect a new direction of influence of government policies and technology companies in research. In the past, computer science research was an international effort among scientists from all over the world. However, pressure to reduce the theft of intellectual property and the promotion of corporate products has created silos of research that may not achieve global benefits. One of the negative effects of this trend is that contemporary research starts to express taints of nationalism, commercialization, and militarization. Care taken to reduce the negative effects of commercialization and nationalization of research institutions may boost transparent and open research in the future.

Information colonialization may have devastating effects on the contributions of small business. As more and more political officials rely on social media to reach constituents, the role of social media in governance has more than an advertising potential. Politicians engage on social media throughout their elected terms and social media companies have amended their services to promote political strategies. The increasing relationship between politicians, social media companies, constituents, and consumers may lead to a greater cooperation among social media, government, and citizens.

Technology has provided access to information through digital media. Social media allows for communication on computers and devices. Access to information and media through digital devices may improve literacy. Adult literacy may be improved if there are more adults reading information that appears on their digital devices. Adult literacy may also be reduced by the type of content that appears on digital devices. An area of further research may be the affect that digital media has on literacy.

Standardization of labour laws may be an enabling strategy for the improvement of workplace conditions. The creation and placement of employment opportunities may be a key strategy for the recovery of the economy. Artuso and McLarney (2015) suggest that international standards for workplace condition can be created by tying labour standards to trade agreements. Harrison, Barbu, Campling, Richardson, and Smith (2019) also argue governing labour standards through free trade agreements. Gericke (2014) discusses the relationship between international law and labour law.

Employment can create goods and services that can be sold domestically and abroad. These goods and services can in turn increase our trade balance with other nations and provide innovation for improving the domestic infrastructure. Employment may serve as a better tool for improving the economy than receiving assistance from the government. Creating employment may mean providing services for businesses to create employment opportunities. Employment can also continue research and innovation to create new goods and services. Overall, employment opportunities may be seen as a strategy for economic recovery.

Improving labour markets may reduce the risk of information coloniality (Dupe, 2015). Dupe (2015) explains how communication from the organization is important for clarifying roles, developing loyalty, and improving performance. Ajonbadi (2015) suggests hiring temporary workers and contractors as an effective means for eliminating labour

shortage. Mika (2012) explains advantages in union contracts over collective bargaining for arbitrating electronic workplace monitoring by providing restrictions for implementing acquired electronic communications. Hernandez (2010) suggests improvements to civil rights law to represent a more ethnically diverse workplace.

Cavico (1997) describes different types of employment misrepresentations such as regarding the terms and conditions of employment, providing false statements of the financial condition of the employer, providing false statements for continuing employment, misleading candidates, discharging an employee for whistleblowing, misleading statements about employment practices, and misleading statements about compensation.

Ryskaliyev et al. (2019) describes labour rights provisions to include equal opportunity to obtain suitable employment and compensation without discrimination and the ability to demand restoration of violated labour rights. Schwab (2017) explains how employment laws can correct market failures. Harwood (2016) identifies that disabled people experience more employment discrimination in distribution and recognition. Ifejika (2019) explains that without adequate protection, whistleblowers can be discouraged from reporting wrongdoings in corporations.

Schwerdtle, Bowen, and McMichael (2018) mention migrations from changes to ecological systems have occurred since the beginning of time. The migrations of people have often been from coastal areas to other regions (Salameh, Bandel, Alhejoj, & Abdallat, 2018). McMichael and Barnett (2012) discuss the difficulty in attributing recent human migration to climate change. Stojanov et al. (2016) describe motivations for population migration often to be multi-faceted. The migrations of people have often been due to a collection of reasons that are intertwined between circumstances, policy, and opportunity (McMichael, Barnett, & McMichael Anthony, 2012). Hwang and Lee (2017) investigate the possibility of environmental risk as an incentive for population migration. Sarjana (2018) comments populations that migrate due to

harsh environmental conditions are often referred to as environmental or climate refugees. Okukpon (2020) discusses legality and human rights of international policies for irregular migration of children. McMichael et al. (2012) encourage policy makers to reflect the complexity of migration when addressing the relationship among migration, health, and climate change. Schwerdtle et al. (2018) suggest making health systems more climate-resilient and inclusive of populations of migrants. Zhai (2020) presents talent can be attracted through population migration through encouragement for investment and entrepreneurship.

Emerging strategies in the study of climate change may provide enhanced tools for researchers and policy makers (Lineman, Do, Kim, & Joo, 2015; Sarofim et al., 2021; Skeie, Peters, Fuglestedt, & Andrew, 2021). Sarofim et al. (2021) develop a temperature binning technique for evaluating socioeconomic impact of climate change. Skeie et al. (2021) promote the study of historical contributions to climate change for future forecasts. Lineman et al. (2015) provide a sentiment analysis of the discussion of climate change. Richards, Lupton, and Allwood (2021) simulate the worst case scenarios of food insecurity, societal collapse, and climate change. Kolusu et al. (2021) evaluate risk assessment in climate change models.

Climate change is difficult to measure as there are many data points to collect such as ocean temperatures, tides, storm patterns, or density of certain particles in the air. Many of the data points do not have enough historical data for which to make strong assessments. However, the past few years have revealed some significant weather occurrences may be basis for the theory that climate change is occurring. Another hypothesis to that theory is that we as humans are contributors to the change in climate and can do something to curtail or contributions to climate change. Whether this is the case or not, we can at the minimum be prepared for climate change if it does occur. This recent storm may be an indication that climate change is more than a myth but a fact and something we need to prepare for if we cannot curtail it.

Inclement weather brings not only damage to crops, but also changes to the planning of crops. If record temperatures and extreme weather seasons are signs of the occurrence of climate change, the agricultural effects present a challenge for farmers that can last years. Planning how these seasonal changes will affect planting and harvesting may benefit from evaluating the possibilities of weather changes over the next few years. With many historical records dating back only a century, additional approaches to analysing past data may be adequate for understanding the agricultural effects of climate change.

Shortages of computer microchips and increasing demand have created opportunities for semiconductor companies to explore new production locations. As the auto and technology industries contend for available chips to fuel their products, new locations for semiconductor production has become a pursuable option for chip manufacturers. This possibility raises awareness about improving the design and functionality of this technology. Ideally, semiconductor manufacturers will cooperate with the communities in informing the public on the risks and benefits of the locations of the chip manufacturing plants.

Efficient design of the programming of the microchips that combine processing units, memory, and peripherals for technology products such as smart devices and electric cars could lead to more efficient management of hardware resources. For a period in technology history, the focus was on making chips faster on smaller. The system-on-a-chip has driven a trend towards making the entire computer faster and smaller. Efficient programming for system-on-a-chip hardware could increase capabilities of next-generation technology.

Although historically record temperatures may or may not be attributed to climate change, the possibility that industrial development could facilitate greater risk to the climate is to be explored. With higher demand for microchips, new semiconductor industry production facilities may increase the level of pollution and increase the risk of climate change. The relationship between the semiconductor industry and pollution levels is an

area that may be critical if the demand for microchip technology continues to increase at a rapid rate.

Risk management tools are resources that municipalities and organizations operate to assess the possibility of scenarios that the future may present. Forecasting supports risk management by observing trends from past data. Models and simulations allow for visualizations of outcomes. In the complex society where many components can influence a potential crisis, grows the evidence of the importance of risk management.

The meta-journalistic review presents ideas to achieve peace within the existing governmental structure and technology. The institutions that exist before technology is included can be reviewed to ensure coexistence with new systems that are put in place. Alhendi, Tóth, Lengyel, and Balogh (2021) explain that cultural diversity can be measured; however tolerance for cultural diversity may be difficult to measure. Alhendi et al. (2021) explain that harmony in a society may be a measure for tolerance for cultural diversity. Bender et al. (2021) discuss some of the limitations for technology to accurately represent diversity. The design of the research will include measures to describe representation for diversity. A representation of diversity may not be accurate as described by media, cultural or political entities, or legal terms. Hale (2020) explains challenges in international laws to represent the diversity of national laws. A statistical representation of diversity may be a viable measure for accurately describing diversity.

## 5. Conclusion

The international community can support nation building in the Horn of Africa by providing equal and accountable policies, humanitarian aid, and public diplomacy (Bereketeab, 2010; Silvestri, 2019; Tase, 2013). Silvestri (2019) suggest respect for human rights, accountability, stability are part of the nation-building processes that can be implemented to achieve peace in Somali. Tase (2013) suggest a strong defensive military, humanitarian aid, and public diplomacy to counter terrorist organizations in Somalia. Bereketeab (2010) deciphers a complexity of identity, history, state, and narrative

components that contribute to conflicts between Eritrea and Ethiopia. Bereketeab (2010) suggests that the international community develop just and equal policies when approaching the conflict between Ethiopia and Eritrea.

Dubbink and van Liedekerke (2020) recommend that the principles of Kant can be implemented as criteria for moral purity in business, self-discipline, sacrifice, and moral pride. As business exists in a democracy, businesses should participate in the efforts to protect democracy in resource constrained environments. Eliassi-Rad et al. (2020) suggest as a policy recommendation to improve democracy to mandate representation and objectivity. Mandating harmony and tolerance for cultural diversity can also contribute to a healthy democracy.

The recommendation should also consider climate change concerns in any implementation for resource constrained environments. Espinoza and Aronczyk (2021) explain how corporate control of climate change concerns has led to a limited effort by corporations to address environmental issues. Espinoza and Aronczyk (2021) describe the “informating” of environmental issues by large corporations that focus on profit-oriented data practices to mitigate climate change. The policy recommendations should have an effective protocol for addressing the possibility of contributing to climate change.

Technology developments have been a tool in achieving calculations that were once challenges of the human. With the assistance of technology, humans became capable of drawing conclusions and solving problems that were not simple for human minds. Computers, first able to solve mathematical problems then ventured into other questions of problem solving. Computers were given the challenge of storing and sharing information. A lot of effort was sacrificed to increasing the capability of storing and sharing. So much effort was given to this task that it became international competition. It also became a field of study. As these capabilities developed, it became a disability. The storage and sharing of information now hinders progress in other areas. Human and civil rights are now in jeopardy because of the storage and sharing of

information. Government, non-government organizations, and businesses are not able to function effectively because of the sharing and storage of information. The sharing and storage of information has undermined authority and facilitated illicit activity. Technology which was once designed to provide assistance to thought has now become a tool of destruction. To reach this point, technology has had to transform through arenas where it has been molded for this pattern. Technology was first designed as part of scientific research. Early discoveries were then manipulated for military purposes. After developments through the military, it was adopted by schools and universities as a way to deliver training. Then technology was commercialized as a way to advertise and market. The advantages of storage allowed for the practice of conducting business transactions. Combining communication with the media allowed for social media. Throughout all the area of technology, the parties of inclusion and exclusion molded it for their purpose. Parties of inclusion designed and built it while parties of exclusion modified and remolded it. Some parties such as the elderly, children, or disabled people never had much decision making in the design of technology. The result was that technology was never designed for these parties. Through all the modification, technology grew farther and farther from these parties. As the audience of technology becomes more skewed, the intent of technology design becomes more obvious. The path that technology follows becomes more and more dangerous as the designers are more elusive and exclusive. The trend is reaching where a small group controls all the resources in technology and completely removes themselves from communication to the rest of the world.

Agitation in the corporate world or specifically in the technology industry is often met with resistance by executive leaders. Reinforcement steps to encourage abiding of labour laws could include a number of new policies that may convince violators to address their violations. Subramanyam and Dasaraju (2014) suggest detailed disclosure requirements to improve transparency in corporate governance. Ceresia and Mendola (2019) explain how perceptions of a lack of enforcement of corrupt

activities can impact entrepreneurial activity. Liu (2016) discusses measures that can reduce corruption such as decentralizing organizations, increasing competition, providing information, extending terms of local officials, and increasing public sector salaries. Third part oversight is one policy that may introduce a strategy for observing more violations. Third party oversight could derive from a federal agency, local governments, or partnerships, between businesses and trade organizations. Increasing civil penalties for violations could make the repercussions so high that the violators do not consider the risk of such a violation. Increasing the civil penalties could also demonstrate the attention that regulators have in this jurisdiction. Another policy is to create a reporting measure within employers that forces them to disclose data on their employment practices. This policy allows for competition between employers on how they abide by regulations. This policy would create a public record of their acceptance of these policies. These policy recommendations are steps to improving acceptance of written laws and regulations for employment.

Identifying the root cause of why employers violate labour laws may provide greater strategies for understanding the need for these policies in the first place. Besides the obvious, access to free or cheap labour, employers that violate labour laws must be motivated by some ideal on why they choose to break the law to employ workers. Recently, there has been a trend of companies that were exposed of ignoring domestic workers to hire cheap foreign labour, companies obtaining raw and manufactured goods from places with cheap illegal labour, and companies implementing discriminatory hiring practices. Although companies have the opportunity to make the decision to honour employment laws, their objectives to deliver products with cheaper costs may also be supported by additional influences. Further research may go into the studying the root causes of labour law violations.

Continued challenges with the delivery of technology services demonstrate the need for an algorithmic reporting system. Many technology systems rely on technology with tools such as image analysis, facial recognition, and barcode scanning.

The increasing reliance on these systems requires standards, policies, and regulations to insure these systems operate efficiently and ethically and are not implementing bias. As these technologies become routine in business operations, the need for an algorithmic reporting system becomes clear. The Community Reporting of Algorithmic System Harms (CRASH) from the Algorithmic Justice League is an example of a reporting system that can serve the public for providing oversight to emerging technology systems.

In order to proactively address security concerns and ethical issues in the information technology industry it may be necessary to improve and require technology education programs. Technology education programs can benefit from leading from the front on issues such as data breaches, diversity, data privacy, and organizational development. As information technology services become more common place, technology education can standardize the quality of services that consumers receive.

Emerging technologies such as open data and online communities may facilitate collaboration for investigative peace journalists. Cho and Wash (2021) study the experiences of encounters on online communities. Noveck (2017) predicts that open data may eventually lead to more active citizenship and more collaborative governance. Online communities may also benefit from the ability of investigative peace journalists to collaborate on reporting. Prilla, Blunk, and Chounta (2020) prescribe for designers of online communities to enable tools for collaborative reflection.

Educational institutions have transformed learning to meet the restrictions of the health crisis. Many educational institutions have pursued remote education as an alternative to classroom learning. Another policy that may also be a substitute if the need presents itself is distance learning. Distance learning allows students to continue learning without relying on the technology that remote learning requires. Distance learning can consist of a book list or printed assignments or can even be included to support remote education

systems. Remote learning has become a popular feature of delivering educational services during a crisis and distance learning is an option that in some instance may meet the same requirements for providing quality educational tools.

New stories, documented by immersive journalists that captivate audiences with the ability to combine virtual and augmented reality into the telling of events, bring a new genre of media into a society that continues to embrace the digital. Immersive journalists spawn from a wide range of backgrounds from art, to communication, to technology. Immersive journalism crosses the borders of the design of multimedia to exceed the limits of technological devices to reinvent the canvas of how we have observed the world. Immersive journalists are not just artists, but scribes of digital art calligraphy.

Crowd sourcing and open source programming combine to deliver new services for communication and providing support while building technology tools. Open data and open source code are minerals that can enrich technology product development. Introducing artificial intelligence and machine learning, technology designers create enhanced environments as emerging technology spaces.

Digital meta-journalistic reviews, not only a new mode for accessing journalism, is also a new environment of tools, processes, and practices for journalism research (Konow-Lund, 2019). Godler, Reich, and Miller (2020) make the distinction between knowledge mediated by humans and knowledge mediated by machines in contemporary journalism. Parasie (2015) demonstrates collaboration in investigative journalism between traditional journalists and data journalists which was able to operate within economic and epistemological constraints. Konow-Lund (2019) proposes neutral intermediaries to align traditional journalists with the routines, practices, and roles of the digital journalism ecology.

Investigative journalists often have to navigate through a number of challenges in accomplishing their tasks (Suntai & Shem, 2018). Suntai and

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Shem (2018) discuss the risks and hazards of investigative journalists such as political interference, economic constraints, and limited access to information. Ismaila, Ahmada, and Mustaffa (2014) describe challenges in reporting on leaders without access to public documents. Bromley (2017) highlights the participation of

investigative journalism in advancing human rights.

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