

# Global Communications in Covid-19 Pandemic Era: A Theoretical Review of the Anxieties and Role of ICTS/Social Media

---

**Benjamin Obioha**

Department of Mass Communication,  
Federal Polytechnic, Oko  
*benkeleobi@gmail.com*

**Udeh, Kenneth Nwannebuike**

Anambra State Judiciary, Awka  
*kennby1982@yahoo.com*

**Izunwanne, Gloria Nnedimma**

*izunwannegloria@gmail.com*

**Abstract**

*No doubt, various countries of the world are, today, integrated into a global community with the help of Information and Communication Technologies (ICTs) and social media. Hence, as the COVID-19 pandemic continues to plague the world and foist restrictions on geographical migrations, global businesses and physical congregations, these technologies and software apps remain the bedrock of human communications, by facilitating global health awareness campaigns about the pandemic, as well as, enhancing interpersonal interactions and social-distancing safety protocol, through digital convergence. This paper, therefore, is a theoretical review of the anxieties and role of ICTs/ social media in COVID-19 pandemic Africa and Nigeria in particular. The paper adopts technological determinism theory to explain the global dependence on ICTs and social media, during the pandemic. Digital divide, fear news, misinformation, political interferences and news flow imbalance are discussed as key anxieties of the use of ICTs/social media in the COVID-19 pandemic era. Against the backdrop of these setbacks, it is recommended that governments of developing countries should invest in ICTs innovation and promote social media education to bridge obvious digital divide in global communication. Additionally, state actors should avoid placing strict restrictions on the use of the Internet, so that citizens would be kept abreast with global issues, such as the emergence, spread and safety protocols of the Coronavirus pandemic and other related global health emergencies.*

**Keywords:** *Global communication, COVID-19 pandemic, ICTs, social media*

## Introduction

The Coronavirus pandemic caused by Severe Acute Respiratory Syndrome, Coronavirus-2 or *SARS-CoV-2*, was first reported in Wuhan, a commercial city in the Hubei Province of China. However, since the outbreak of its first wave on 31<sup>st</sup> December, 2019 (see World Health Organization, WHO Covid-19 update, 2019), the virus has plagued the world, over-stretching health facilities, especially, in developing nations, hurling many families into poverty, with many cases of job losses and human deaths.

In Nigeria, the first confirmed case of coronavirus was reported in Lagos, on 27<sup>th</sup> February, 2020, when an Italian citizen tested positive to the virus, and on 9<sup>th</sup> March, 2020, in Ewekoro, Ogun State, a second case was announced, through contact-tracing of those who had come across the first case. Ibrahim and Ekundayo (2021) argued that most people infected with the novel coronavirus would experience mild to moderate respiratory illness and recover without requiring special treatment; but older people and those with underlying medical problems such as: cardiovascular diseases, diabetes, chronic respiratory diseases and cancer, are more likely to develop serious illness.

Thus, as a result of the contagious effect of the pandemic, its wide spread and later declaration as a Public Health Emergency of International Concern (PHEIC) on January 30, 2020, by the WHO,

governments across the world began to adopt different clinical and non-clinical safety protocols cum social behaviour change conventions, aimed at fighting the virus and checking its speedy spread (see *WHO* Guideline, 2020). Among these social behaviour change pacts include, but not limited to: national and global embargoes on voyages within and across borders, restrictions on physical socio-political, educational and socio-economic congregations, adoption of social-distancing strategies, regular hand washing with running water or application of alcoholic-based hand-sanitizer, as well as, wearing of protective facemasks, especially in public places and facilities.

Indeed, embargoes on tours within and across national precincts, restrictions on physical socio-political, educational and socio-economic congregations, drastically affected the various aspects of world's economy-system of production, distribution and consumption. Some of the key industries affected are: manufacturing industries, healthcare facilities, public services, commercial sectors, production/food supply chains, transportation sectors, tourism, media and entertainment industries, and large conferences.

Despite the dysfunctional impacts of the global health crisis, people need to sustain communications with their business associates, family and friends around the world; public, private, and faith-based organisations

want to thrive; students must be engaged in academic learning unhindered and media have to maintain steady updates about the virus in various countries and regions, what Ran (2020, p. 4) codenamed “undivided need for information dissemination, interconnected communications and uninterrupted businesses”.

It is against this background that it becomes imperative for the global adoption of Information and Communication Technologies (ICTs) and social media to bridge the vacuum created in human activities by the pandemic. ICTs and social media play and are still playing cornucopia of significant roles in sustaining, unhindered, businesses activities, religious congregations and evangelism, social and educational events and interpersonal relationships across the globe. Nevertheless, communication practices through technologies, in COVID-19 era, do not go without challenges; hence, this paper reviews the role of ICTs and social media in global communication in the course of the pandemic, as well as, the attendant setbacks in the use of these technologies.

## Review of Literature

### Understanding the Concept of Global Communication: Issues and Trends

The terms ‘global’ and ‘international’ are often used interchangeably, when referring to something or an activity

that goes beyond national or regional boundaries- meaning, spanning or extending throughout the entire world. Thus, global communication is the same as international communication. Simply stated, this genre of communication involves the sending and receiving (exchange) of information throughout the entire world; it is communication that flows through and across the various countries of the world. In line with the foregoing explanations, Nwabueze (2014, p. 267) cited by Udeh (2016, p.16), defined global communication as “The exchange of ideas between and among two entities that exist in different nations, distant or scattered places; it could be described as the dissemination of and access to information across countries, through technological gadgets that facilitate such process.” Udeh (2016) further provided a more explicit explanation on the different forms global communication could take place:

...sending or receiving a Short Message Service (SMS) from a friend abroad, engaging in a GSM phone chats with family members or a business partner outside Nigeria, sending or receiving electronic mails from Nigeria to and from a friend in the United State of America; ... Using the social media, such as Twitter, Google+, YouTube, Mark Zuckerberg’s Facebook, Skype and WhatsApp to access, share and respond to information

across the world, staying in Africa and watching the FIFA World Cup competition in Brazil, World Economic Summit in Davos, Switzerland and Syrian War documentary being relayed through the CNN, BBC, CCTV24, AIT, NTA international, Channels TV or on your mobile phone, laptop or other global communication gadgets, as well as assessing the World Wide Web (WWW). (p.15)

Besides, Obioha and Udeh (2016, p. 142) opined that 'Global communication is communication at worldwide level, which employs the instrument of global mass media or Information and Communication Technologies (ICTs) to disseminate and exchange information among nations of the world'. Tersely put, social media and ICTs are the drivers of global communications: the telephones, smartphones, tablets and computer, telecasts, online televisions, online radios, satellite etc., and social media, described by Marwick (2010) as *web 2.0-based* application. These technologies, certainly, pave the way for global communication right from the eras of the world wars (Madikiza & Bornman, 2007). The world is now so closely knitted and interconnected that the barrier of distance in communication has become history, communication flows around the globe are, these days, much easier, faster and better with ICTs- especially those that

are Internet-enabled. Information with national, regional and international relevance, such as crisis communications about COVID-19 health emergency, can be shared and accessed within seconds, in any part of the world, through the various international media, using ICTs and social media platforms on the Internet. The practice of global communication allows people and societies to engage with each other with relative ease. It is characterised *inter-alia* by "...the accelerated flow of information, ideas, images and sounds across national and other frontiers, the construction of multinational urban centres and global media corporations, the live broadcasting of major events and crises" (Constantinou, Richmond & Watson, 2008, p.5). One of the downsides of global communication that raises a lot of concern is the issue of cultural imperialism. Therefore, regardless of the New World Information and Communication Order (NWICO) debate that raised concerns about cultural identity and the right to participate in global information flows in the 1970s, global communication still remains the advantage of the West (Carlsson, 2017; Magder, 2003). The media of third world countries are characterised by many inadequacies and so, unable to follow up to reach the possibility of having a balanced information flow in the global communication arena.

The quantity and quality of information that mainstreams into the third world countries from the

developed nations is overwhelming. According to Carlsson (2017), these imbalances may lead to “The extinction of uniqueness, of definitive cultural idiosyncrasies.” Nonetheless, global communication, through ICTs and social media empowers marginalised groups in the international community and makes their voices heard; it also creates new spaces for exploring alternative communities of identity, irrespective of their geographical residence through the various social media platforms (Madikiza & Bornman, 2007). For example, Nigerian youths, in October, 2020, used the social media to launch the popular hashtag, *#ENDSARS* into the global sphere, and their voices were heard across the world; thus, making the protest and everything surrounding it an issue of global concern. Moreover, similar circumstance applies to the non-stop worldwide dissemination of useful health tips and safety measures, as regards global fight against COVID-19 pandemic.

### **ICTs and Social Media as Desiderata for Global Communications**

It is imperative to understand the nexus between ICTs and social media. Nwodu and Fab-Ukozor (2003) cited in Nwodu (2007) stated that the acronym, ICTs is a generic name that encapsulates a number of communication ‘hardware’ used for the dissemination or transmission of information and social values

instantaneously from one corner of the world to another. Nwabueze (2014) gave explanations of the term ICTs thus:

Information and Communication Technologies (ICTs) are communication gadgets, hardware equipment that have modernized, improved and eased exchange of ideas and information of various kinds between and among people within or across distant boundaries or frontiers. They are also called New Communication Technologies (NCTs). The computer, Internet, World Wide Web, GSM technology, Microwave, Cable and Satellite radio/television channels are among technological strides that have transformed and are still transforming human existence today. (p. 268)

On the other hand, social media have a narrower concept. Also known as *social interaction applications*, social media refer to Internet or Web-based ‘software’, Web 2.0 (they allow for easy editing of contents, graphics and images), that can be downloaded and installed in new media/ICTs to facilitate quick one-to-one, one-to-many, many-to-many, participatory and interactive social communications, over a distance. The key relationship between the two concepts is that social media and new media/ICTs are Internet-compliant, but social media

are both Internet-compliant and ICTs-dependent. That is, for social media: Facebook, WhatsApp, YouTube, Instagram, Twitter, Skype, Telegram, and Zoom to perform optimally, they ought to be downloaded and installed in an Internet-enabled ICT device.

One significant characteristic of ICTs and social media is that they reduce space or distance barrier to communication- a situation that could be described as *convergence* and *de-location of sending and receiving of information*. They have shrunk the world into a small unit that is very knitted and interconnected, prompting McLuhan (1962) to use the construct “global village” to describe the world in a technological age. The quantity and quality of messages around the globe have become unparalleled; and the speed can be nearly instantaneous (Magder, 2003). Satellites, for example, have transformed the way news is disseminated and received around the world. The idea of breaking news depends every minute updates and each second matters a lot in the global competitive news amphitheatre. People can listen to online radio programmes and watch live news broadcasts on TV stations that are far beyond their geographic residence. The international news media work with several correspondents in various countries, who give live reports on events happening in different parts of the world. Example includes, watching the broadcasts and updates about the COVID-19 pandemic crises in the United States of America, Britain,

India, Italy, Brazil and other parts of the world, Israeli-Palestine war 2021, elections in France, war in Syria, protests in India and Nigeria, live on the CNN, Aljazeera, PressTV, BBC, and Channels TV. The availability of mobile devices (laptop computer, tablets, iPhone and smartphones) and other digital tools have eased the toils of travels, because they make geographical borders meaningless (Zembylas & Vrasidas, 2005). This is because social interactions can be done online through various social media platforms such as on Facebook, Zoom, Twitter, WhatsApp etc.

Also, ICTs and social media have increased popular participation in public sphere on matters of global relevance. People can engage in *citizen or participatory journalism*- join in discussions of news and debates on global politics, policies, economy, business and so on, formation of public opinions and creation of User-Generated-Content (UGC), as well as, amplify or reinforce beliefs or opinions by communication and repetition inside a closed system; thus enhancing a situation, termed *Echo chamber*. They can cover events or happenings within and around their communities with their mobile phones and report instantly. Besides, international or multinational organisations can send mails and memos electronically or choose to conduct international e-conferences to save them the cost of transportation and accommodation of participants. The e-conference can be done through

the Internet software apps: Zoom, Google Meet, Skype, Microsoft Teams, etc.

The Internet and the World Wide Web are fathomless and endless spaces with myriad information stored up by individuals (scholars, writers, bloggers) or organisations from around the world. Thus, with the help of search engines such as: Google, Yahoo, Internet Archive and Bing; social media such as YouTube and websites of organisations, people can access information for whatever gratifications they seek. As a result, ICTs and social media, help to enhance *e-learning* or acquisition of knowledge. The mainstream media also push their contents on the Internet and the Web; thereby, providing global audiences with alternative platforms to source for news in the absence of the offline TV, radio, magazine and newspapers. The acquired information from any of these sources can also be shared through the social media platforms.

### **Advent of Second and Third Waves of COVID-19 in Nigeria: The Contributory Factors**

The Presidential Task-Force, PTF, on COVID-19, officially declared a second wave of COVID-19 infections in Nigeria, on 17<sup>th</sup> of December, 2020, resulting from the rising number of cases detected in the country, as evident in the statistics that were reported in some Nigerian cities, particularly, Lagos, Ogun and the Federal Capital Territory, Abuja,

despite the nation-wide lockdown. For instance, Ibrahim and Ekundayo (2021) stated that on the 23<sup>rd</sup> of December 2020, about 1,133 new confirmed cases and 5 deaths were recorded in Nigeria, bringing the total confirmed cases in Nigeria to 84,811 cases; 71,357 cases were discharged and 1,264 deaths recorded across the 36 states and the Federal Capital Territory. While announcing the second wave, Chairman of the PTF and Secretary to the Government of the Federation, Mr. Boss Mustapha stressed that Nigeria was at the risk of losing not only the gains from hard work of the last nine months (periods of the first wave), but also the lives of citizens (see Channels Television live YouTube,

<https://youtu.be/9bQOR6mkehC>, 2020). Recently, on 12<sup>th</sup> July, 2021, the Reuters correspondent in Lagos State, Nigeria, Libby George, reported that Nigeria, Africa's most populous nation, had been as hard hit by the COVID-19 pandemic as other parts of the continent, with over 168,000 cases and 2,124 deaths confirmed, since the outbreak began. Thus, the Nigerian Centre for Disease Control, NCDC confirmed that it had detected what could be described as the third wave of Coronavirus in Nigeria, otherwise known as the '*Delta variant*'; thereby, putting its officials nationwide and the general public, on red alert, but the NCDC did not state exactly when the infected traveller arrived Nigeria.

"From the beginning of July, we started to experience a steep increase

in the number of daily confirmed cases, with the test positivity rate going from 1.1% at the end of June 2021 to its current rate of 6.6% as at 8<sup>th</sup> of July 2021", Lagos State Governor Babajide Sanwo-Olu said in a statement. "The rapid increase within a week gives great cause for concern" (Libby George, 2021). There are factors that are responsible for the sudden rise in the number of confirmed cases of the virus. These factors could be blamed for the second and third waves of the pandemic in Nigeria. Ibrahim and Ekundayo (2021) highlighted some these factors thus:

**a. Bad Governance/Perceived Government's Inability to Win the Trust of the Citizenry.** Since the first case of the virus was confirmed in Nigeria, many people have expressed doubt about the information coming from the government agencies at various levels, regarding the existence of the deadly virus in Nigeria. Others who appeared to believe that the virus is indeed in Nigeria do so in part, as they tag it the "rich-man's virus". Some even believe that the government is out to make money through the unreal virus. For the latter group of people, they tag the virus "corona-business". Simply put, there are poor social mobilization strategies and persuasive communications by governments to rally Nigerians and convince them to accept the presence of Coronavirus disease in Nigeria.

In foreign climes, such as the United Kingdom, the United States of America, Italy and other countries badly hit by the pandemic, victims of the virus, including government officials, were constantly shown on television and leaders were seen, addressing their citizens on daily basis, on the efforts being put in place to contain the virus, but in Nigeria, every activity surrounding Coronavirus infection was shrouded in secrecy; thus broadening citizens' suspicion about the existence of the virus in Nigeria. The distrust among most Nigerians may have made the people throw caution to the wind by living their normal life and not adhering to the safety protocols aimed at reducing the spread of the virus.

**b. The *End-SARS* Protests in Nigeria.** Another factor that cannot be divested from the sudden rise in the cases of coronavirus is the ENDSARS demonstrations that engulfed Nigeria for about a month in October 2020. The Cable News Network, CNN report of 9th December 2020, reported that "Nigerian cities were engulfed by series of protests in October to demand the disbandment of the SARS (Special Anti-Robbery Squad)- a unit in the Nigerian Police Force, alleged to have been terrorizing the same

citizenry they were meant to protect.

Youths across the nation gathered together to protest against police brutality and bad governance, and many of them defiled the government's laid-down rules on COVID-19 prevention. There was no observance of physical distancing, a reasonable number of them refused to use facemasks, and those who used it, hung the masks below their cheeks". It is logical to think that many of the youths might have contracted the virus during the protests and now, Nigerians are seeing the manifestation of the exercise.

- c. **General Poverty in Nigeria/Bad Economy.** Poverty might be one of the contributing factors to the manifest sharp increase in coronavirus in Nigeria. A survey by the National Bureau of Statistics in 2019, as reported by the Punch Nigeria, showed that the number of people living below one Dollar (\$1) per day is put at 82.9 million, about 40.1% of the population of Nigeria. For several months in Nigeria, people were not allowed to go out during the first wave of COVID-19; comfortable people, mostly, the middle class and political office holders, complied with the lockdown order. But people who

depend on daily toils for survival, flagrantly disobeyed what they tagged "inhumane law". This set of people neither believe there is coronavirus nor have the financial power to purchase facemasks, should they choose to believe that it exists. Certainly, poverty in Nigeria and bad economy forced many Nigerians out of the streets to break into warehouses across Nigeria, and cart away COVID-19 palliatives that were purportedly concealed by government officials, instead of sharing them to the people during the nationwide lockdown. Other factors include: increase in political activities, funeral ceremonies, social gatherings and religious activities without strict adherence to COVID-19 safety measures.

### **ICTs, Social Media and Global Communications in the COVID-19 Era**

No sooner had the world heard about COVID-19 than it spread like wildfire around the globe. However, amidst the severity of both national and global restrictions on international migrations and physical interactions and congregations of persons, as means of checking the spread of the virus, ICTs and social media are embraced worldwide, as the liberators. These redemptive functions of communication technologies in the

COVID-19 pandemic era, are expounded thus:

- 1. Uninterrupted Interpersonal Connections among Family and Friends:** People who have family and friends scattered in different parts of the world are, yet, able to stay connected with the help of ICTs and social media, in the COVID-19 era.

Geographical borders were closed, but the digital/cyber spaces remained open or gateless; people continue to communicate across space and time. As the Coronavirus cases and concomitant death rate rose, so did the panic, but with the help of ICTs and social media, people could not only listen to the voices of their loved ones at home and in the diaspora, but also see them via audio and video chats respectively, to ensure that they are safe and healthy. As the desire to check on friends and family members keeps increasing in this current health crisis, so did the use of digital communication increase, because in-person means of communication are less possible at the moment (Nguyen, Gruber, Fuchs, Marler, Hunsaker & Hargittai, 2020).

- 2. Development of New Skills and Upsurge in Social Activities:** Despite physical restrictions in the COVID-19 era, many

Internet users got themselves busy with the Internet. While some people learnt new skills, like fashion designing and products marketing, through the Internet, others either search new information and updates on the pandemic or get entertained. As social activities upsurge, so also the number of Internet users. As at 2012, the total number of Internet users in Nigeria was 48,366,179 and in 2019, they rose to 120,780,000 (Internet World statistics, 2012 cited in Terragon Insight Report, 2013; NOIPolls, 2019). Before the lockdown, Internet subscribers in Nigeria increased to 140.7 million and during the full lockdown, Nigeria recorded up to 2.5 million new Internet subscribers (Paul, 2020). It was reported in the UK that an estimated 4.6 million people newly signed up to streaming services such as: Netflix, Amazon and Dysney+ in order to alleviate the impact of the restrictions on physical social activities during the lockdown (Sweeney, 2020). Particularly, Amazon and Netflix recorded more than 60% growth in the number of subscribers (Financial Express, 2020). Furthermore, Internet-enabled ICT infrastructure continue to help the continuation of social activities during the pandemic (Ran, 2020). The lockdown had

long been eased in various countries and as the need for social distancing still persists in the second wave of the pandemic, sporting activities and talk-shows go on without the physical presence of fans or audiences. However, organisers still make it possible for their audiences to be virtually present during such activities. Religious activities continued online during the lockdown, especially through social media platforms and on national and international traditional media.

### 3. **Online Growth of Local, National and Global Economy:**

A popular saying holds that ‘anything that has disadvantages, has advantages’. While the deadly pandemic persists, there are increased reliance on digital media, among the various sectors of world’s economy. COVID-19 pandemic, though, fraught with economic hardships, it opens up golden possibilities for digital media and also affects how we use them in all other aspects of our lives (Nguyen et al, 2020). For instance, with the belief that life must go on, many businesses engaged in online sells, online banking, buying and selling of air tickets, GSM airtime top-ups and Cable TV bill payments increased online. Also, schools both local and international adopted *e-learning* via ‘virtual classrooms’ to ensure that their

students, irrespective of wherever they are, use search engines for asynchronous learning, which has been on the rise because while students were asked to stay home and stay safe, the need to keep them engaged also became paramount (Obioha & Izunwanne, 2020). There are now even more online international academic conferences with the help of Google, zoom and the rest. Soprana (2020) stated, ICTs services and ICT-enabled services have boomed because firms in both the private and public sector have resorted to ‘a smart-working approach and digital solutions’ in order to minimize the negative impact the pandemic would have on employment and the entire global economy. Similarly, ICTs have emerged as the saviours and ameliorators of the pandemic’s many disruptions to almost every dimensions of daily life. Many pandemic-related disruptions to essential dimensions of our lives (healthcare, education, livelihoods, etc.) have been overcome thanks to ICTs and new Information Systems (IS) artefacts (Parra, Gupta & Mikalef, 2020, p. 1). Considering the rate at which the world depends on the Internet and other digital devices at this time of stringent restrictions on physical assemblies, Nguyen *et al* (2020)

postulated that people may develop preferences for these approaches to communication and retain them and as such, turn to habits that outlast the outbreak itself.

**4. Significant Impact on Curbing the Spread of COVID-19**

**Virus:** Even in nations where there are insufficient healthcare providers and dearth of sophisticated ICTs, messages about the virus still get to people through affordable ICTs, such as mobile and/or smartphones (Abbot & Barbosa, 2015). Social media and ICTs have been used to “enhance public awareness and prevention, surveillance, diagnosis, treatment and coordinate response for COVID-19” (Zaman, Islam, Zaki & Hossain, 2020, p.2). Through social media, people all over the world monitor the progress in COVID-19 vaccine production and distribution, as well as, the availability and administration of the vaccines around the globe. According to Ran (2020), digital technologies such as big data, Artificial Intelligence (AI) and cloud computing supported by the ICT networks are imperative to monitor and analyse the pandemic, track the virus, prevent and control the pandemic. Netizens- those who are actively involved in online communities, are utilizing the social media to share this

acquired information about the virus with their family and friends and have also joined in promoting the hashtags **#Stayhome** and **#Staysafe** as campaigns against the spread of the virus.

**The Quagmires of Global Communications in the COVID-19 Era**

No doubt, following the limitations on human physical congregation and interactions, with a view to containing the spread of COVID-19 pandemic, ICTs and social media have been of prodigious benefits towards sustaining global communication and business activities. Notwithstanding, the use of social media and ICTs for global communication in the pandemic era, has some setbacks to effective communication flow in less-developed cultures, particularly Africa. Generally, this quagmire could be as a result of poor investment in ICTs infrastructure and probable low Internet penetration in the region. Some of these bogs or challenges are:

**i. Digital Divide:** Digital divide is routinely used to describe a situation of imbalances or inequalities existing between developed and developing cultures, the haves and the have-not, the tech-savvy and the less tech-savvy individuals, regarding ICTs/social media *innovations, availability, accessibility and knowledge*. Concerns about digital divide are also gaps

identified between majority and minority populations; the younger generations (digital natives) and the seniors (digital immigrants); and urban and rural populations (Lin, 2014). In other words, the world is not universally connected as extremely as it is perceived because of these clear disparities. Based on the forgoing arguments, Carlsson (2017) stated that:

The globalization we see today, however, is not always global. In some respects, the world is more fragmented today than perhaps ever before; there are sharp divisions...Thousands of millions of people lack access to the mutual interaction that globalization makes possible. Exclusion is the plight of the poorest countries of the south, yes, but also of the poorest in the richest countries... Exclusion is more than a question of material assets – it is also a question of access to knowledge and culture. (p.55)

The technological divide between developed and developing nations exacerbates the enormous inequality in global communication (Lorente, Arrabal & Pulido-Monte, 2020). The problem at the global level when it comes to digital divide according to Lin (2014, p. 604) is “an outcome of media system, political infrastructure, and cultural factors in combination

with socio-economic conditions”. When it comes to technological advancements, developing countries are far behind and this, invariably, affects the quality of communication flow between them and developed countries. According to Lorente, Arrabal and Pulido-Monte (2020), the lack of Internet or almost non-existent Internet connectivity characterises poorest geographical areas of the world and it remains a challenge in global communication. Effective flow of communication both within a country and globally, cannot be possible when the resources necessary to join the conversation, remain costly to many and, in certain cases, virtually unavailable (Magder, 2003); for instance, the conversations around the emergence of COVID-19, its history, safety protocols, vaccine development and distributions. One may also have access to a digital device but lack adequate knowledge to use it for global communication. This explains that physical access to ICTs and social media differs from critical access to them (Zembylas & Vrasidas, 2005). In addition, communicating to friends and family in diaspora before and during this pandemic can be disrupted because of slow Internet services coupled with unavailability of free Wi-Fi services. Also, using digital devices that are not up-to-date can affect communication flow. No wonder Nguyen *et al* (2020) emphasized that digital inequalities are further reinforced during the COVID-19 pandemic, because the less tech-savvy-

the older people, as well as, those with lower Internet skills and those without steady incomes for Cable-TV subscriptions, purchase of Internet data or acquisition of Internet-based ICTs devices, are becoming increasingly disconnected from society and the world at large, because they have less access to adopting new ways of communicating.

**ii. Misinformation:** Knowing how to use the Internet is one thing, but knowing where to find credible information is another. Many people are not media literate enough and thus, not critical consumers of online information.

Individuals who depend on the Internet for global communications are, perhaps, at risk of being exposed to 'fake news' and 'fear news' alerts, which determine their opinions and judgements about global issues and actions, such as the COVID-19 virus. Thus, Parra, *et al* (2020, p.1) argued that "The pandemic could be aggravating one of ICTs' most troubling side-effects, namely: the enabling and promotion of increasingly polarized, radicalized and even extremist viewpoints." Misinformation (fake and fear news alerts) can arguably, emanate in the forms of sensational, exaggerated, fearful, false or unverified information that flood the Internet, especially, in this era of 'gateless, street, participatory or citizen journalism', through social media- whereby the

netizens are both users and generators of contents (prosumers). A lot of information online is uncensored, thus, making most of social media platforms, a hive of misleading information concerning the pandemic. Generally, the outbreak of COVID-19 virus spread panic round the globe and the attendant lockdown created even more panic. People were yelling to know the cause of the virus and the possible cure for it, this situation leads to constant search for information from every corner of the world. As a result, both verified and unverified data emerged. At first, the Chinese were blamed for having appetite for every living animal species, and the Internet was flooded with pictures and videos of the live animal market in Wuhan, China. However, following a video that went viral on social media of some Chinese people eating soup cooked with fresh bat meat, many Internet users across the world speculated that the virus originated from bats (BBC, 2020). Along with that, a lot of conspiracy theories sprang up, such that suggested *inter-alia* that the virus was some sort of a biological weapon orchestrated to reduce global population (Gharib, 2020); and that 5G installation in various countries was a way of facilitating its spread (Ahmed, Vidal-Alaball, Downing & Seguí, 2020). Some Nigerian netizens came up with the idea that COVID-19 is just being exaggerated by the government and the media (Olatunji, Ayandele, Ashirudeen & Olaniru, 2020). Another

false information that inundated the Internet concerning the virus was about its possible cure. It spread like wildfire that *chloroquine* and *hydroxychloroquine* were the cure for the virus even while they were yet to be tested and certified by the WHO.

According to Samuels and Kelly (2020), between February and April, 2020, claims about hydroxycloquine and chloroquine as the treatment for COVID-19 had been mentioned on social media over 80,000 times, prompting a lot of people to visit pharmacies to purchase theirs. The high demand for chloroquine tablets even caused a price hike in many Nigerian pharmacies and because the claim had no clinical evidence, Nigeria recorded chloroquine poisoning around that time (Busari & Adebayo, 2020).

**iii. Political Interference:** The prevailing political system in a given country determines the flow of communication to a very large extent. For instance, an authoritarian system of government is a rigid system that does not permit press freedom and citizens' right to freedom of expression. Similarly, a democratic political culture allows participatory and free-flow of information. However, an authoritarian government is often threatened by the robust information that saturates the Internet and the rate at which access to it increases, so they keep controlling the flow of

information for reasons, such as: public order, protection of state process, leaders or institutions and national security (see KictaNet, 2017 cited in Mar, 2019). Suppression of public information could also occur in democratic states. Magder (2003, p.40,41) argued that the reason for such possible restriction of access to free flow of information, could be to avoid panic or reduce fear among the populace. Government of countries can limit the use of ICTs and social media, by shutting down the Internet space at will, either partially (some Internet services) or completely and as such, blocking its citizens from the rest of the world. This is a recent situation in Nigeria. On 4<sup>th</sup> June, 2021, the Federal Government of Nigeria announced that it had, indefinitely, banned Twitter operation in Nigeria, and on 5<sup>th</sup> June, the government shutdown **#Twitter** operation, citing irresponsible use of the microblogging site among citizens to heighten insecurity across Nigeria, as well as, undermine 'Nigeria's corporate existence'. This ban came, after Twitter had deleted the President's Tweet, which Twitter said violated its ethical policy.

When Coronavirus pandemic was declared a public health emergency,

the Global Digital Rights Group Access called on the governments of Ethiopia, Myanmar, Bangladesh and India who had tampered with free flow of global communication, to end all deliberate interferences with the right to access and share information about the pandemic and during that time, these countries already had active cases of the virus (Chandran & Wuilbercq, 2020). Reports show that there has been a dramatic decline in the global Internet freedom since the coronavirus pandemic (Freedom House, 2020 cited in Hubbard, 2020). According to the Freedom House Report from a research conducted within the period of June, 2019 to May, 2020 to determine Internet freedom in 65 countries (accounting for 87% of internet users worldwide), the pandemic was cited as a reason for the introduction of certain restrictions on speech and arrest of online critics; blocking of websites, suppressing critical reporting or unfavourable health statistics or other content related to the coronavirus (Jee, 2020). Based on the report, Iceland, Estonia, Canada, Germany, United Kingdom, France and the United States ranked high in the Internet freedom index in the pandemic while Iran, Syria, Vietnam, Cuba and China scored the lowest in Internet freedom (Hubbard, 2020). In COVID-19 pandemic era, political hindrances against the free flow of communication do not only block people from communicating with friends and family across the world, using digital devices, but also,

ultimately, shut out a lot of people from obtaining useful health information concerning the spread of the virus and the standard WHO's prevention protocols.

**iv. News Flow Imbalance:** The level of technological advancements differs from one country to another; particularly, between the developed and the developing countries. This directly influences the global flow of communication. Since there remains an inequality in terms of advancements in technology, those with the most sophisticated ICTs exert dominance in the flow of communication in the global sphere. Magder (2003) painted a picture of this inequality thus:

One way to make sense of the vastness of this daily symbolic traffic is to measure the flow of messages across borders and to identify the main interlocutors – those people or institutions who speak most frequently across vast distances. The tallies should come as no surprise. In the aggregate, Western countries predominate in the flow of news and information as well as entertainment.

They dominate too in the production and management of the cross-border flow of computer data and the use of surveillance technologies, such as remote sensing satellites, to gather and

disseminate information for commercial and political purposes. And of the Western countries, the United States is easily the most dominant entity in every facet of the world communication system. (p.31)

This means that the western ideologies are what soak the global space, they are likely to frame the news to their own advantage. According to Carlsson (2017), global media organisations can commercialize content and consequently, may cover more of the interests of the wealthier consumers than general interests. The content (news, films etc.) about their poorest consumers tend to tilt more towards the negative than the positive and this in turn, conditions the mind of every consumer to accept that the western life is the ideal life (Udeze, 2005). The pandemic also came with 'infodemic'- too much information across the globe concerning coronavirus, especially, online. A lot of people depend on the mainstream media for global updates about the pandemic. Consequently, these people consume more of the pandemic information coming from the West than in their immediate environment. At the peak of the pandemic, Madagascar gained the attention of the global media when President Andry Rajoelina announced that a plant-based tonic produced in his country could prevent and cure COVID-19 in April, 2020 (Atabong, 2020). This global attention was short-lived after the WHO declined to endorse the COVID Organics (CVO) stating that Africans deserve to use

medicines tested to the same standards as people in the rest of the world (Houmfa & Guensburg, 2020). Since there was no proof from the WHO that the CVO was a cure for COVID-19, the 'international news media' dismissed every report about the COVID Organics it as mere unfounded statement, while they await the production of vaccines by the West. The point is that, as long as the third world countries do not have the wherewithal to compete favourably in global communication, they would continue to be dependent on the developed nations' media to report their achievements and contributions to global affairs and global communication flow will continue to assume both qualitative and quantitative imbalances against the third world countries, in favour of those who have attained greater affluence.

## **Theoretical Foundation**

### **Technological Determinism Theory:**

Technological determinism theory is often linked to McLuhan (1962) who described technology as 'the prime mover'- a strong and autonomous force that transforms society at every level or in different eras in history (including communications or social interactions, institutions, economic and political development). In other words, society adapts to new technologies and innovations (Hauer, 2017). Technology here, is seen as the major or primary factor for social change,

while human factors and social agreements are seen as secondary (McKirahan, 2014). In media studies, the theory focuses on advancements in communication technologies as Chandler (2013) posited:

Technological determinists interpret technology in general and communication technologies in particular as the basis of society in the past, present and even the future. They say technologies such as writing, print, television or computer 'changed society'. In extreme forms, the entire form of society is seen as being determined by technology. (p.1)

The way the world used to function before the ICTs and social media revolution is not the same way it functions now. It is difficult to conceive of a functioning world in the 21st century without the television, satellites, facsimile, the Internet, cellular phones, compact disks, digital computers and many other ICTs (Alleyne, n.d). The ICTs such as the Internet and the Web are responsible for the interconnectedness of the world; they allow humans to create the 'global village'. This interconnection facilitates an extraordinary speed in sending and receiving of information through time and space. Technological advancements are the drivers of globalization. The Internet and other digital technologies are responsible for

the interconnectedness of the world and facilitate information dissemination globally. Therefore, individuals of different socializations, organisations and governments of the world fall in line to reap from the benefits of the ICTs and social media. However, technological determinism theory has been criticised based on the premise that technology does not exist in isolation, but in society and therefore is born out of society based on the decisions of individuals in society (Slack & Wise, 2007). This means that technologies in themselves do not drive changes, rather the people and the way they use technologies determine how certain changes occur in the society. Luhmann, 1993 cited in MacKenzie and Wajcman (2012) argued that technology is one of the many social processes and not the sole determinant of social order as stated by the technological determinism theorists. Marshal McLuhan saw communication technologies as extensions of the human social self.

This theory is relevant to this paper, because in the 21<sup>st</sup> century, people depend on ICTs and social media for global information sharing and dissemination, such as information about the COVID-19 pandemic. In the era of COVID-19 pandemic, the use of ICTs and social media has significantly increased; these technologies have been serving as substitutes for physical interactions, as a result of the stringent restriction on global migrations. Put differently, the world would stay connected despite

the pandemic, justifying the popular saying that “When the desirable (physical human interactions) is not available, the available (ICTs and social media) becomes the desirable”.

### **Conclusion**

The world has indeed shrunk into a small place, preferably, ‘a global village’. The Internet and other digital technologies in global communication play unprecedented role and these roles cannot be overemphasised. Despite the difficulties that are associated with the outbreak of Coronavirus, the world still stays connected; activities that require physical presence of individuals have quickly adjusted to the use of ICTs and social media. In the era of COVID-19, the ICTs and social media do not only keep people connected to their business partners and loved ones who live in other countries, but also serve as escape routes to a lot of people who often connect to get new information and entertained.

However, owing to some setbacks linked to the use of ICTs and social media, people could not benefit much from the vast opportunities provided by these communication technologies and applications. These global communication setbacks in COVID-19 pandemic era include: problem of digital divide, misinformation, political interference and news flow imbalance. In line with the assumptions of technological determinism theory, this paper asserts that advancements in communications

technology have made global communications possible. Thus, in the era of COVID-19 pandemic, the use of ICTs and social media has significantly increased; these technologies have remained substitutes for physical interactions and ease of doing businesses, irrespective of the restrictions placed on national and global migrations as well as large assembly of people.

### **Recommendations**

Based on the findings from literature reviewed, the following recommendations suffice:

- In order to bridge the digital divide and facilitate healthy competitions between the haves and the have-nots, governments of developing countries should invest in ICTs and encourage ICTs/ social media innovations and education in their countries.
- Also there should be global technology transfer among nations, based on the economic principle of ‘comparative cost advantage’. ICTs and social media should not just be available, but also accessible and affordable to all.
- Democratic states should avoid putting strict restrictions on the use of the Internet. They should encourage freedom of information and expression, especially, this time, when people are eager to know what is happening in the global sphere

concerning the pandemic, its spread and possible cure.

- The state and non-state actors in the global health arena, and indeed, the media, through the mainstream media and the various new media platforms, should continue to conduct social behaviour change campaign against possible gullibility to hypothetical information concerning the pandemic, especially, that which would pose a threat to the health of individuals, as well as, campaign for people to strictly adhere to all the proposed safety protocols designed towards the containment of the spread of Coronavirus.

## References

- Abbott, P. A., & Barbosa, S. F. (2015). Using information technology and social mobilization to combat diseases. *Acta Paulista de Enfermagem*, 28 (1), 1. [https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0103-210020150001&lng=en](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-210020150001&lng=en)
- Ahmed, W., Vidal-Alaball, J., Downing, J. & Seguí, F. L. (2020). COVID-19 and the 5G conspiracy theory: Social network analysis of Twitter data. *Journal of Medical Internet Research*, 22 (5), 1-9.
- Alleyne, M. D. (n.d). International communication and world affairs. *Journalism and Mass Communication*, 1. © UNESCO-Encyclopaedia of Life Support Systems (EOLSS).
- Atabong, A. B. (2020). How Pan-African media helped Madagascar advance its claim of a COVID-19 ‘miracle cure’ as form of medical diplomacy. Essay Series. *African Journalism and Media in the Time of COVID-19*. December 2020.
- British Broadcasting Corporation (2020, January 30). China coronavirus: Misinformation spreads online about origin and scale. *BBC News*. <https://www.bbc.com/news/blogs-trending-51271037>
- Busari, S., & Adebayo, B. (2020, March 23). Nigeria records chloroquine poisoning after Trump endorses it for Coronavirus treatment. *CNN World*. <https://edition.cnn.com/2020/03/23/africa/chloroquine-trump-nigeria-intel/index.html>
- Carlsson, U. (2017). The rise and fall of NWICO: From a vision of international regulation to a reality of multilevel governance. *Nordicom Review*, 24 (2), 31-67. Doi: 10.1515/nor-2017-0306.
- Chandler, D. (2013). Technological or media determinism. <https://www.aber.ac.uk/media/Documents/tecdet/tecdet.html>
- Chandran, R., & Wuilbercq, E. (2020, March 27). Internet shutdowns ‘not justified’ in coronavirus outbreak. *Reuters*. <https://www.reuters.com/article/u>

- s-health-coronavirus-tech-rights/internet-shutdowns-not-justified-in-coronavirus-outbreak-idUSKBN21809M
- Constantinou, C. M., Richmond, O. P., & Watson, A. M. S. (2008). International relations and the challenges of global communication. *Review of International Studies*, 34, 5-19. doi:10.1017/S026021050800778X
- Financial Express* (2020, May 20). Amazon and Netflix witnessed more than 60% growth in subscriber base during lockdown: Velocity MR study. *Financial Express*. <https://financialexpress.com/bandwagon/amazon-and-netflix-witnessed-more-than-60-growth-in-subscriber-base-during-lockdown-velocity-mr-study/1965362/>
- George, L. (2021, July 12). Nigeria's Lagos state faces "potential third wave" of covid-19. *Reuters*. <https://www.reuters.com/world/africa/nigerias-lagos-state-faces-potential-third-wave-covid-19-2021-07-12/>
- Gharib, M. (2020, February 21). The coronavirus crisis: Fake facts are flying about coronavirus. Now there's a plan to debunk them. <https://www.npr.org/sections/goatsandsod/2020/02/21/805287609/theres-a-flood-of-fake-news-about-coronavirus-and-a-plan-to-stop-it>
- Hauer, T. (2017). Technological determinism theory and new media. *International Journal of English, literature and social sciences*, 2 (2), 1-4.
- Houmfa, M., & Guensburg, C. (2020, May 7). Madagascar's COVID-19 'cure' raises pride, health concerns and political risks. *Voice of America*. <https://www.voanews.com/covid-19-pandemic/madagascars-covid-19-cure-raises-pride-health-concerns-and-political-risks>
- Hubbard, K. (2020, October 27). Pandemic fuels global decline in Internet freedom. *US News*. <https://www.usnews.com/news/best-countries/articles/2020-10-27/coronavirus-pandemic-fuels-global-decline-in-internet-freedom>
- Ibrahim, O. M., & Ekundayo, D. D. (2021). Covid-19 pandemic in Nigeria: Misconception among individuals, impact on animals and the role of mathematical epidemiologists. [https://www.preprints.org/manuscript/202004.0492/download/final\\_file](https://www.preprints.org/manuscript/202004.0492/download/final_file). Doi:10.20944/preprints202004.0492.v2
- Jee, C. (2020, October 14). Governments are using the pandemic as an excuse to restrict internet freedom. *MIT Technology Review*. <https://www.technologyreview.com/2020/10/14/1010361/government-are-using-the-pandemic-as->

- excuse-to-restrict-internet-freedom
- Lin, C. A. (2014). Global communication divides and equal rights to communicate. In R. S. Fortner & P. M. Fackler (Eds.), *The handbook of media and mass communication*. Chichester, West Sussex, UK: John Wiley & Sons, Inc, pp. 591-611. <https://www.onlinelibrary.wiley.com/doi/pdf/10.1002/9781118591178.ch32>
- Lorente, L. M. L., Arrabal, A. A., & Pulido-Monte, C. (2020). The right to education and ICTs during COVID-19: An international perspective. *Journal of Sustainability*, 12, 1-16. Doi:10.3390/su12219091.
- Madikiza, L., & Bornman, E. (2007). International Communication: Shifting paradigms, theories and foci of interest. *Communication*, 33 (2), 11-44.
- Magder, T. (2003). Watching what we say: Global communication in a time of fear. In D. Thussu & D. Freeman (Eds.), *War and the media: Reporting conflict 24/7*, 28-44. London: Sage Publications.
- MacKenzie, D. & Wajcman, J. (2012). Introductory essay: The social shaping of technology. *The London of Economics and Political Science (LSC) Research Online*. <http://eprintd.lsc.ac.uk/28638/>
- Mare, A. (2019). The effects of internet shutdowns in societies: Lesson for SADC member state. *A paper presented and submitted to the Southern Africa Regional Dialogue on Internet access*. November 5, 2019.
- Marwick, A. E. (2010). *Status update: Celebrity, publicity, and self-branding in web 2.0*. London: Yale University Press.
- McKirahan, J. N. (2014). Technological determinism vs. social determinism/constructivism, the politics it brings: A theory of technology. *A presentation on technological management and manufacturing systems*.
- McLuhan, M. (1962). *The Gutenberg Galaxy: The making of typographic man*. Toronto: University of Toronto Press.
- Nwabueze, C. (2014). *Introduction to mass communication: Media ecology in the global village*. Owerri: Top Shelve Publishers.
- Nwodu, L. C. (2007). ICTs, globalization and domination of African cultural values: A development communication perspective. In I. E. Nwosu & E. S. Oludayo (Eds), *Communication in global, ICTs & ecosystem perspectives: Insights from Nigeria*. Enugu: Precision Publishers Ltd.
- Nguyen, M. H., Gruber, J., Fuchs, J., Marler, W., Hunsaker, A., & Hargittai, E. (2020). Changes in digital communication during the COVID-19 global pandemic: Implications for digital inequality

- and future research. *Social Media + Society*, 1-6.
- NOIPolls (2019). *Social media poll report: Nigeria's teledensity and preferred internet access device*. Maitama, Abuja: NOIPolls Limited.
- Obioha, B. K., & Udeh, K. N. (2016). Tackling systemic corruption in Nigeria: Perspectives and roles of international communication. *Oko Journal of Communication and Information Science (OJCIS)*, 2 (1), 138-150.
- Obioha, B. K., & Izunwanne, G. N. (2020). The virtual learning strategy in the phase of the coronavirus pandemic and its potency in the Nigerian education system. *A paper presented at an e-conference of the School of Information Technology, Federal Polytechnic, Oko, Anambra State, 26<sup>th</sup> August, 2020*.
- Olatunji, O. S., Ayandele, O., Ashirudeen, D., & Olaniru, O. S. (2020). "Infodemic" in a pandemic: COVID-19 conspiracy theories in an African country. *Journal of Social Health and Behaviour*, 3 (4), 152-157.
- Parra, C. M., Gupta, M., & Mikalef, P. (2020). Information and communication technologies (ICT)-enabled severe moral communities and how the (Covid19) pandemic might bring new ones. *International Journal of Information Management*, 57 (2021) 1-16.
- Paul, E. (2020, July 10). Nigeria hit 2.5 million new internet subscriptions during the lockdown. *Techpoint Africa*. <https://www.techpoint.africa/2020/07/10/nigeria-internet-subscriptions-lockdown>
- Ran, N. (2020, May 16). Technology plays key role in rebuilding economies and international cooperation after COVID-19 pandemic. *Global Times*. <https://www.globaltimes.cn/content/1188548.shtml>
- Samuels, E., & Kelly, M. (2020, April 13). How false hope spread about hydroxychloroquine to treat covid-19 – and the consequences that followed. *The Washington Post*. <https://www.washingtonpost.com/politics/2020/04/13/how-false-hope-spread-about-hydroxychloroquine-its-consequences/>
- Slack, J. D. & Wise, J. M. (2007). *Culture and technology: A primer*. New York: Peter Lang.
- Soprana, M. (2020). Leveraging ICT-enabled services for Trade in times of pandemic: The case of AI-enabled health services. *A contribution to the Policy Hackathon on Model Provisions for Trade in Times of Crisis and Pandemic in Regional and other Trade Agreements*. [https://www.researchgate.net/publications/346564256\\_Leveraging-ICT-enabled\\_services\\_for\\_Trade\\_in\\_](https://www.researchgate.net/publications/346564256_Leveraging-ICT-enabled_services_for_Trade_in_)

- Times\_of\_Pandemic\_the\_case\_of\_AI-enabled\_health\_services
- Sweney, M. (2020, May 15). Streaming services add 4.6m new subscribers during UK lockdown. *The Guardian*. <https://www.theguardian.com/media/2020/may/15/streaming-services-uk-netflix-amazon-prime-video-disney-subscribers-coronavirus>.
- Terragon Insight Report (2013). State of digital media Nigeria. *Terragon Limited*. [www.terragonltd.com](http://www.terragonltd.com)
- Udeh, K. N. (2016). International communication: Perspectives, issues & the role of ICTs. *Post-Graduate Diploma (PGD) long-essay (Unpublished) presented to the Department of Mass Communication, Nnamdi Azikiwe University, Awka*.
- Udeze, S. E. (2005). *After the whirlwind: A discourse on international communication*. Enugu: Rhyce-Kerex Publishers.
- WHO Guideline (February 12, 2020). COVID-19: Public health emergency of international concern. *Global Research and Innovation Forum*. [https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-\(pheic\)-global-research-and-innovation-forum](https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-(pheic)-global-research-and-innovation-forum)
- WHO (2019). Coronavirus disease (covid-19) update. [https://www.who.int/bangladesh/emergencies/coronavirus-disease-\(covid-19\)-update](https://www.who.int/bangladesh/emergencies/coronavirus-disease-(covid-19)-update)
- Zaman, A., Islam, M. N., Zaki, T., & Hossain, M. S. (2020). ICT intervention in the containment of the pandemic spread of COVID-19: An exploratory study. *Department of Computer Science and Engineering, Military Institute of Science and Technology, Mirpur Cantonment, Dhaka, Bangladesh*. <https://www.semanticscholar.org/paper/ICT-Intervention-in-the-Containment-of-the-Pandemic-Zaman-Islam/2c146cbd938e7d0e49e887dd06225c3f1443ecbf>
- Zembylas, M., & Vrasidas, C. (2005). Globalization, information and communication technologies, and the prospect of a 'global village': Promises of inclusion or electronic colonization? *Journal of Curriculum Studies*, 37 (1), 65-83.