"Jurisprudential Norms without Precedence": Upholding Liberty and Prosperity amid the Obscurity of Laws in the Era of Disinformation Technology

Sheila Mae T. Cabazares

Foundation for Liberty and Prosperity

2020-2021 Dissertation Writing Contest

DEDICATION

To those enthralled with the sagacity of the judiciary

ABSTRACT

New-age technology inevitably influences the kind of cases that the courts adjudicate. Advances in artificial intelligence (AI), for instance, created "deepfakes" or high-level simulation of faces and voices which have been egregiously used in manipulating pornographic videos to falsely depict the face of an intended victim. This AI-enabled disinformation technology was very recently used by a mother in Pennsylvania to disqualify her daughter's cheerleading rivals. The dearth of pertinent Philippine laws thus imperils the right of Filipinos to data integrity, among others. Given the statutory mandate that silence, obscurity, or inadequacy of laws should not impede judicial decisions, how then can the judiciary uphold the liberty and prosperity of Filipinos when laws cannot keep up with emerging technologies?

The paper addresses this issue in a two-pronged approach to the precept of "jurisprudential norms without precedence," a framework primarily drawn from the works of Chief Justice Artemio Panganiban. The academic prong foregrounds the source-norm dichotomy which recognizes the distinction between legal sources and legal norms. And, the pragmatic prong underlines judicial globalization through engaged international dialogues of a judiciary that is attuned with epochal realities. Weaving the prongs together is the liberty-prosperity nexus as a judicial philosophy.

The proposed framework does not only highlight the indispensable role of the judiciary vis-à-vis the inadequacy of laws. It also stresses the challenges that require advocacy and subsidy due to the reticulate nature of law and technology. Hence, enthused public discussions on substantive rights in the context of emerging technologies, such as the right to data integrity, are equally relevant. After all, it takes a village to stimulate and support a judiciary well-adapted in protecting liberty and in nurturing prosperity under the rule of law.

OUTLINE

Chapter 1 provides the theoretical and legal contexts of the research with a discussion on the regulation-innovation relationship of law and technology and how this relationship, or lack thereof, affects legal rights issues such as in the case of deepfakes in artificial intelligence.

Chapter 2 further views the issue in the context of cybercrimes and the right to data integrity through a survey of international laws and Philippine laws relevant thereto. The relevance of each law to the issue on rights violation in deepfake abuses is discussed.

Chapter 3 is a discussion on "jurisprudential norms without precedence" as a theoretical framework drawn primarily from the works of Chief Justice Artemio Panganiban. The framework, reinforced by the liberty-prosperity philosophy, is elaborated by an examination of the nature of judicial decision-making.

Chapter 4 addresses the key research question through an elaboration on the theoretical framework using two prongs: the academic prong deals with the source-norm dichotomy in relation to judicial decision-making; and the pragmatic prong that sustains judicial globalization through international dialogues.

Chapter 5 envisions means of going forward by discussing opportunities and challenges for the judiciary in terms of international engagement, as well as challenges for the general public in terms advocacy in data integrity issues.

Chapter 6 encapsulates the key points pertaining to the indispensable role of the judiciary and how the aforesaid two-pronged approach for jurisprudential norms without precedence may protect liberty and nurture prosperity amid gaps between law and technology.

TABLE OF CONTENTS

I. Law and Technology…… 6
A. Introduction…….. 7
1. Regulation and Innovation…….. 8
2. Deepfakes and Data Integrity…….. 9
B. Research Question and Thesis Statement ……... 13
C. Objectives…….. 14
D. Significance……... 14
E. Research Methodology……... 15
F. Scope and Limitations……. 15

II. Cybercrime and Data Integrity:
International and Philippine laws ...……. 16
A. Classification of Cybercrimes…… 16
B. Data integrity v. Data security …….. 17
C. Data integrity and international initiatives…….. 19
1. Budapest Convention on Cybercrime ……. 20
2. ASEAN Declaration to Prevent and Combat Cybercrime……... 21
3. Data Protection Regulation……... 21
4. United Nations Convention on the Rights of a Child…… 21
5. European Convention on Human Rights …….. 22
6. International Covenant on Civil and Political Rights……... 22
D. Data Integrity and Philippine Laws……. 23
1. Anti-Wire Tapping Law …….. 23
2. E-Commerce Act ……... 24
3. Access Devices Regulation Act ……... 24
4. Anti-Child Pornography Act …….. 25
5. Anti-Photo and Voyeurism Act …….. 25
6. Cybercrime Prevention Act …… 26

III. "Jurisprudential Norms without Precedence"……. 30
A. Judicial Decision-Making: Nature and Approaches…….. 30
B. Liberty-Property Nexus as a Judicial Philosophy…….. 35

IV. The Two-Pronged Approach……... 39
A. Academic Prong: Source-Norm Dichotomy…….. 39
B. Pragmatic Prong: Judicial Globalization…… 43

V. Going Forward: Liberty and Prosperity Amid Gaps between Law and Technology……. 47
A. Challenge for the Judiciary: International Engagement……... 47
B. Challenge for Every *Juan*: Technology-mediated Social Advocacy…… 50

VI. The Indispensable: Jurisprudential Norms without Precedence Amid Gaps between Law and Technology……. 54

Bibliography 57

"Jurisprudential Norms without Precedence": Upholding Liberty and Prosperity amid the Obscurity of Laws in the Era of Disinformation Technology

The Court does not lust for the brute power of the executive. Neither does it desire to have the patronage of the legislature. It prays only for courage, integrity and sagacity, for these are its only tools with which to fulfill its work and to deserve the people's trust.

- Chief Justice Artemio Panganiban[1]

I. LAW AND TECHNOLOGY

A. Introduction

Technological advancements inevitably impact the kind of justiciable controversies presented before the courts especially when emerging technologies make legislative assumptions obsolete.[2] The problem is even more apparent in many countries where legislators cannot keep up with the pace of technology.[3] In the Philippines, for instance, Act No. 3815 or the Revised Penal Code have provisions for crimes[4] that remain unchanged since 1932.

[1] Panganiban, Artemio. (1999). *Leaders by Example.* Manila: Supreme Court Printing Press.

[2] Robinson, Keith. (2018) "Emerging Technologies Challenging Current Legal Paradigms." Minnnesota Journal of Law, Science, and Technology, vol. 19, issue 2.

[3] Malan, Daniel. (2018) "The law can't keep up with new tech. Here's how to close the gap." World Economic Forum, available at https://www.weforum.org/agenda/2018/06/law-too-slow-for-new-tech-how-keep-up/, accessed on March 5, 2021.

[4] See for example Article 247 of the Revised Penal Code on death or physical injuries under special circumstances.

To contextualize the legal and theoretical background of this research, this Chapter offers a general discussion on the relation between law and technology and an examination of the legal issues related to the rise of deepfakes. The presentation of research questions, objectives, and limitations proceeds thereafter.

1. Law and technology: Regulation and innovation

The relation of law and technology is often construed as adversarial.[5] For some, this is due to the element of regulation.[6] As emerging technologies give rise to a modified or new behavior as well as conflict in rights[7], regulatory measures to protect and enforce rights become indispensable. However, as technology is viewed to symbolize expansion and growth, regulation is perceived to have a restraining effect which is commonly perceived to impede growth.[8]

Today's technological titans do not necessarily have a consensus when it comes to perceiving technological innovations such as in the field of artificial intelligence. For instance, SpaceX and Tesla CEO, Elon Musk, is pessimistic about advances in robotics as he deemed it detrimental to human laborers who he believes will eventually be replaced by robots.[9] Other technological titans, however, such as business magnate Bill Gates and Facebook founder and CEO Mark Zuckerberg, are enthusiastic about the progress in the aforesaid field.[10]

---

[5] Wiener, Jonathan. (2004) "The regulation of technology, and the technology of regulation." Technology in Society, vol. 26, pp. 483 - 500.

[6] Malan, Daniel. (2018) "The law can't keep up with new tech. Here's how to close the gap." World Economic Forum, available at https://www.weforum.org/agenda/2018/06/law-too-slow-for-new-tech-how-keep-up/, accessed on March 5, 2021.

[7] Belanche, Daniel, Flavián, Marta, and Pérez-Rueda, Alfredo (2020) "Mobile Apps Use and WOM in the Food Delivery Sector: The Role of Planned Behavior, Perceived Security and Customer Lifestyle Compatibility."12 Sustainability, No. 10.

[8] Supra, note 5.

[9] Umoh, Ruth. (2017) "Why Elon Musk Might Be Right About His Artificial Intelligence Warnings." CNBC. August 25, 2017. Available at https://www.cnbc.com/2017/08/25/why-elon-musk-might-be-right-about-his-artificial-intelligence-warnings.html, accessed on March 3, 2021

[10] Hsu, Jeremy (2009). "Robotic Madness: Creating True Artificial Intelligence." Live Science. March 18, 2009, available at https://www.livescience.com/3407-robot-madness-creating-true-artificial-intelligence.html. Accessed on March 3, 2021

The US AI market seems to agree with the latter as it became a 47-billion dollar industry in 2020.[11]

Technically speaking, however, AI is not a new technology. It emerged in 1956 as the science of making computers intelligent.[12] Modern advances in the field, however, differ as to approach and the level of complexity involved. It was only a few years ago, for example, that advances were made to create humanoid robots and cybernetic enhancements on humans.[13] The use of a bomb-disposal robot, Packbot, is another example of an advancement in artificial intelligence which is now being used by the US military.

The ramified implications and issues arising from the relation of law and technology force the judiciary to adapt with the dynamics of such interconnection. It is unimaginable after all to expect laws to be on par with the rate of technological advancement.[14] It has been established that it is extremely "difficult to extrapolate the effects of technological change on society."[15] Experts in the 1800s, for example, used to foretell that New York will become inhabitable in the future due to the accumulation of horse manure in the streets from horse carts, in proportion to the growth of its population.[16] Experts at that time cannot be faulted for being unable to anticipate the form of technological advances in the future.[17] The protection and enforcement of legal rights, in this case, lie significantly therefore in judicial decisions.

In the Philippines, a very good illustration for this lamentable gap between law and technology was when Onel de Guzman, the

[11] Supra, note 2.
[12] Charniak, Eugene and McDermott, Drew. (1985) Introduction to Artificial Intelligence. Boston, Mass.: Addison-Wesley.
[13] Supra, note 10.
[14] Drechsler, Wolfgang and Kostakis, Vasilis. (2014) "Should Law Keep Pace with Technology? Law as Katechon." Bulletin of Science, Technology, and Society, vol. 34, no. 128.
[15] Lederer, Frederic. (2014) Judging in the age of technology. American Bar Association.
[16] Ibid.
[17] Tanneeru, Manav. (2009) "Can the Law Keep Up with Technology?" CNN, November 17, 2009, Available at http://www.cnn.com/2009/, accessed March 3, 2021.

computer science student behind the I LOVE YOU virus, created in 2000 the world's first and considered the most destructive computer virus in history.[18] The virus affected an estimated 45 million machines around the globe with an estimated loss of billions of pounds.[19] Among the well-established institutions affected include the Parliament of the United Kingdom and the Pentagon of the United States.[20]

Since it was only in 2012 when the Philippines enacted its first law against cybercrimes, not a single person was ever prosecuted for the I LOVE YOU virus after the Federal Bureau of Investigation (FBI) tracked down the source of the virus to an apartment in Manila.[21] It was therefore an unfortunate example of the legal maxim *nullum crimen sine lege, nulla poena sine lege* (there is no crime except in accordance with a predetermined law).

However, notwithstanding the enactment of the Philippine cybercrime law, threats arising from emerging technologies remain in the context of obscurity or inadequacy of the law and its related statutes. The question therefore still remains: how may the liberty and prosperity of the Filipinos be upheld when laws lag behind threats from emerging technologies?

2. Deepfakes and Data Integrity

More engaged discussions on legal rights became inevitable with the advancement in AI through deepfakes which have become

[18] Landler, Mark. (2000). "A Filipino Linked to 'Love Bug' Talks About His License to Hack". The New York Times. , Available at https://www.nytimes.com/2000/10/21/business/a-filipino-linked-to-love-bug-talks-about-his-license-to-hack.html, accessed 15 March 2021

[19] White, Geoff. (2020). "Revealed: The man behind the first major computer virus pandemic." Available at https://www.computerweekly.com/news/252481937/Revealed-The-man-behind-the-first-major-computer-virus-pandemic, accessed 15 March 2021

[20] Ibid.

[21] Ibid.

prevalent in recent years.[22] Deepfake is an amalgamation of the words 'deep learning' and 'fake'. It is a media, usually a video, produced through an AI-enabled software that allows a computer to "deeply learn" faces, movements, and voices of an individual in order for it to project the same features to another person.[23] With the advent of user-friendly deep learning tools, one need not have to possess advanced technical skills to produce deepfakes.[24] The application of the technology covers images, videos, video games, virtual reality, and will conceivably be applied in movie productions in the near future.[25]

Figure 1: Deepfake manipulation of actor Daniel Craig's facial expressions using another person's facial movements. Source: Panyatham (2020)

Deepfake became publicly known in 2017 after an infamous post on the social news media Reddit which consisted of AI-manipulated pornographic videos that realistically projected faces of famous celebrities such as Scarlet Johansson, Taylor Swift, and Gal Gadot.[26] In 2019, approximately 14,000 deepfake videos were available online,

[22] Panyatham, Paengsuda. (2020) "Deepfake technology in the entertainment industry: Potential limitations and protections." Carnegie Mellon University, available athttps://amt-lab.org/blog/2020/3/Deepfake-technology-in-the-entertainment-industry-potential-limitations-and-protections, accessed on March 3, 2021

[23] Ibid.

[24] Verdoliva, Luisa. (2020) "Media Forensics and Deepfakes: An Overview." IEEE Journal of Selected Topics in Signal Processing, vol. 9.

[25] Ibid.

[26] Ibid.

most of which were accessible in social media sites such as Facebook, WhatsApp, Youtube, and Instagram.[27] This is why academic advocates such as Boston University law professor Danielle Citron had characterized deepfake technology as "being weaponized against women."[28]

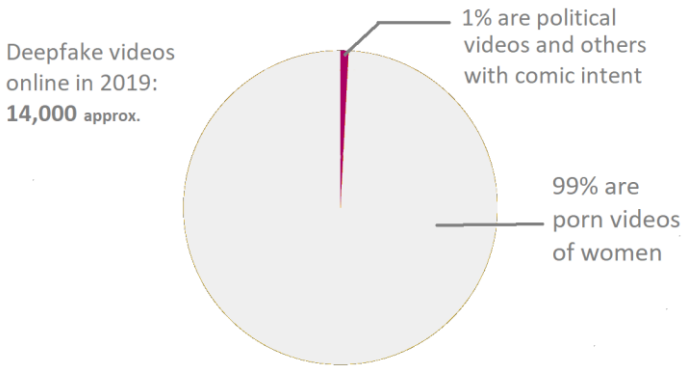

Figure 2: Majority of deepfakes are porn videos of women.
Source: Panyatham (2020) of Carnegie Mellon University

The other 1% of these deepfake videos in 2019 generally involved male political figures and other famous celebrities whose images were manipulated for humorous intent. Some of the most-viewed videos included former US President Barack Obama's fake speech where he called Donald Trump a "dipshit"[29] and Jon Snow from the TV Show Game of Thrones apologizing to the public for the compromised quality of its highly criticized season finale.[30] Deepfake also manipulates voices hence the added level of persuasiveness. This type of technology is referred to in this paper as "disinformation

[27] Ibid.
[28] Sample, Ian. (2020). "What are Deepfakes – and how can you spot them?." The Guardian. January 13, 2020
[29] BuzzFeed. (2018) "You won't believe what Obama says in this video!" Buzzfeed Youtube channel. Available at https://www.youtube.com/watch?v=cQ54GDm1eL0, accessed on March 3, 2021
[30] Eating Things Channel. (2019) "Breaking: Jon Snow apologized for Season 8" Eating Things Youtube channel. Available at https://www.youtube.com/watch?v=4GdWD0yxvqw, accessed on March 3, 2021

technology" or those technological tools used to disinform the public through hi-tech manipulation tools.

Even more vexing is the fact that the technology also has mechanisms to evade deepfake detection. Convolutional neural networks (CNN) is one of the methods used to detect deepfake manipulation.[31] However, by adding a feature referred to as muted "adversarial noise patterns", the CNN will be unable to detect the manipulation at all. Instead, it will categorize it as pristine.[32] It would therefore become very problematic on the part of the offended party to prove that the video does not represent reality.

It is therefore unsurprising how these technological advances were taken advantage of in violation of others' legal rights. In fact, as of the writing of this paper, a mother in Pennsylvania made the headlines after using deepfake images and videos against her daughter's rivals in a cheerleading squad.[33] The intent, according to the prosecutor, was to use the deepfakes in order for the victims to be kicked out of the team. The images involved sexually provocative videos of the victims as well as images depicting drug and alcohol use; nude photos were also deepfaked from the summer photos which the victims have previously posted on their social media accounts.[34]

Abuses of publicly accessible AI technology relates to other contemporary cyber-bullying trends in the form of "slut-shaming"[35] and "revenge porn"[36], both of which negatively affect women. Slut-

[31] Tolosana, Ruben Vera-Rodriguez , Julian Fierrez, Aythami Morales,
Javier Ortega-Garcia. (2020) Deepfakes and Beyond: A Survey of Face Manipulation and Fake Detection, Information Fusion, doi: https://doi.org/10.1016/j.inffus.2020.06.014
[32] Supra note 21, p. 16.
[33] Bellware, Kim. (2021) "Cheer mom used Deepfake nudes and threats to harass daughter's teammates, police say." The Washington Post, available at
https://www.washingtonpost.com/nation/2021/03/13/cheer-mom-Deepfake-teammates, accessed March 16, 2021
[34] Supra.
[35] Van Royen K., Poels K., Vandebosch H., Walrave M. (2018) Slut-Shaming 2.0. In: Walrave M., Van Ouytsel J., Ponnet K., Temple J. (eds) Sexting. Palgrave Studies in Cyberpsychology. Palgrave Macmillan, Cham.
[36] Supra, note 18.

shaming involves an act intended to humiliate a woman due to an imputed sexual promiscuity on her part hence the labels slut, whore, and other similar terms.[37] A common example is to victim-blame sexually abused women such as those who were raped for having participated in an all-boys drinking session. On the other hand, revenge porn refers to the act of past lovers, usually men, who post sexually explicit videos or images of the other ex-partner in order to humiliate the latter.[38] The intimate videos or photos, obtained while they were in a relationship, were later posted online by the bitter ex-lover after a bad break-up.

As deepfake pornographic videos have increasingly became prevalent, the abuse of the same technology in "slut shaming" and in "revenge porn" is but imaginable. The threat is worsened by the fact that detection of manipulation in deepfake videos can be very challenging. Regulation in the use of such technology indeed becomes imminent.

B. Research question and thesis statement

Amid the insufficiency, silence, or obscurity of available laws when it comes to emerging technologies such as AI-enabled disinformation in multimedia contents, the enforcement and protection of rights lie with judicial decisions. As Article 9 of the Civil Code of the Philippines provides, the silence, obscurity or insufficiency of the laws should not impede judicial decisions. This leads to the research question of this paper, *viz:*

How can judicial decisions protect the liberty and nurture the prosperity of Filipinos from abuses of emerging technologies amid the silence, insufficiency, or obscurity of pertinent Philippine laws?

---

[37] Papp, L. J., Hagerman, C., Gnoleba, M. A., Erchull, M. J., Liss, M., Miles-McLean, H., & Robertson, C. M. (2015). Exploring perceptions of Slut-shaming on Facebook: Evidence for a reverse sexual double standard. Gender Issues, 32(1), 57–76.

[38] Humbach, John. (2014) The constitution and revenge porn. Pace Law Review, vol. 35, issue 215.

The paper offers an answer through a two-pronged emphasis on the concept of "jurisprudential norms without precedence" drawn from Chief Justice Artemio Panganiban's *The Bio-Age Dawns on the Judiciary*. First, the academic prong foregrounds the source-norm dichotomy which recognizes the distinction of legal norms and legal sources. And, the pragmatic prong underlines judicial globalization through engaged global dialogues of a judiciary open to international realities.

C. Objectives of the study

This research aims to carry out the following objectives:

1. To identify legal issues in disinformation technology such as abuses of AI-enabled deepfakes, from the perspective of international laws and Philippine laws;
2. To examine current Philippine laws on data integrity protection, or the lack thereof;
3. To offer a two-pronged framework with the aid of the liberty-prosperity judicial philosophy; and
4. To highlight the relevance of judicial globalization in the indispensability of the judiciary in the silence, obscurity, or inadequacy of pertinent laws

D. Significance of the study

The varied ways through which legal rights may be abused in emerging technologies is innumerable. This dilemma is even made more perplexing by the dearth of updated laws that are supposed to regulate the use of such advancements. The public, meanwhile, is left vulnerable in terms of rights protection and enforcement.

The proposed approach in this paper highlights the role of the courts in protecting the liberty and in nurturing the prosperity of the Filipinos despite the silence, adequacy, or obscurity of Philippine laws vis-à-vis emerging technologies. Taking off from Chief Justice Artemio

Panganiban's concept of "jurisprudential norms without precedence," the research provides a framework in support for a judiciary that is well-adapted to protect and enforce rights under the rule of law.

E. Research methodology

Archival research and content analysis of various documents, manuscripts, and audiovisual materials were employed in this qualitative inquiry. The following materials were used as resources:

1. The primary sources include Philippine laws and Philippine jurisprudence;
2. The secondary sources include foreign case laws, law textbooks, journal publications, online references, and lectures and writings of legal luminaries.

F. Scope and limitation

The research on the relation of law and technology is focused on the advances in artificial intelligence, specifically the use of deepfakes, to the exclusion of other related kinds of online abuses. The discussion on actual and potential abuses of deepfake technology and its concomitant rights violation are also focused on cybercrime issues rather than the civil aspect thereof.

II. CYBERCRIME AND DATA INTEGRITY: INTERNATIONAL AND PHILIPPINE LAWS

A. Classification of cybercrimes

One key problem with "cybercrime" is its lack of universal definition.[39] There are generally two common elements, however, in all acts considered as a cybercrime: (1) the use of information and communication technology or ICT and (2) the lack of geographical or physical borders.[40]

Recently, two classifications of cybercrimes are proffered: *cyber-dependent cybercrimes* and *cyber-enabled cybercrimes.*[41] A cyber-dependent cybercrime is one whose commission is only made possible through ICT. On the other hand, a cyber-enabled cybercrime is a traditional, non-technology related crime but was committed through the assistance of ICT.

One distinguishing element therefore between the types of cybercrimes is that they differ in the role of the ICT. With cyber-dependent cybercrimes, the target of the attack is the ICT itself such as a computer network or a computer.[42] On the other hand, the ICT in cyber-enabled cybercrimes is only a tool, not a target; ICT was only used to facilitate the crime.

The "CIA-triad" refers to the rights violated in cybercrimes: *confidentiality, integrity, accessibility*.[43] In terms of confidentiality, the right to make a data private and not available to others without the owner's consent is compromised.[44] Integrity, meanwhile, refers to the right of the owner of a data to ensure that the same will not be subject

[39] United Nations Office of Drugs and Crime (UNODC). (2021) "Cybercrime in brief." https://www.unodc.org/e4j/en/cybercrime/module-1/key-issues/cybercrime-in-brief.html
[40] Ibid.
[41] Europol (2018) Internet Organised Crime Threat Assessment (IOCTA) of 2018. https://www.europol.europa.eu/internet-organised-crime-threat-assessment-2018
[42] UNODC (2021), ibid.
[43] Rouse cited in UNODC (2021), ibid.
[44] Ibid.

to any unauthorized alteration or modification. Accessibility, lastly, is the right of a person to have easy and convenient access to publicly available information.

The aforesaid categories show that deepfake technology abuses relate more closely to the right to data integrity. The abuse may also be cyber-dependent or cyber-enabled since the data can be used as a tool as well as the target. As a cyber-dependent cybercrime, the deepfake technology abuse can be perpetrated through unlawful access to images and videos stored in one's device. The hacked images or videos can then be used as basis for a deepfake video. The act of hacking makes the act a cyber-dependent cybercrime. Meanwhile, the use of the deepfake video itself to the detriment of an individual makes the act a cyber-enabled cybercrime.

B. Data Integrity v. Data Security

The distinction between data integrity and data security is important in examining the ambiguity of a cybercrime law when applied to an emerging technology. The issue could arise, for example, as to which category will an alleged cybercrime fall under for purposes of determining its statutory requisites. This proposal will be further illustrated in Section D under the discussion on cybercrime-related Philippine laws.

Data integrity is not the same as data security.[45] The former relates to accuracy while the latter pertains to privacy.[46] Privacy or confidentiality is separate from integrity, each forming a distinct part of the CIA-triad. With data security, the data involved is authentic and is being protected from unauthorized access. In other words, these are

[45] Ibid.

[46] Wang, T., Bhuiyan, M. Z. A., Wang, G., Qi, L., Wu, J., & Hayajneh, T. (2019). Preserving Balance between Privacy and Data Integrity in Edge-Assisted Internet of Things. IEEE Internet of Things Journal, 1–1. doi:10.1109/jiot.2019.2951687

data that preclude public access for security and privacy purposes. An example is a person's right to data security over his online bank account details.

On the other hand, violation of data integrity means that the data was altered from its original or pristine form. Its consummation, therefore, does not necessarily involve a secured data. It could be a publicly available data modified without right. While this may sound straightforward, the distinction actually becomes more real than imagined when it comes to specifically classifying an act under the presently defined cybercrimes. This will be further illustrated in Section D where an attempt to classify deepfakes under a certain cybercrime will be discussed.

In a deepfake technology abuse, data integrity is always an issue, although both rights to data integrity and data security may be compromised at the same time. Both rights may be involved in a case where the manipulated image or video was also unlawfully obtained. When the manipulated image or video, on the other hand, was made public by its owner, the deepfake video using the said image violates data integrity but not data security. Put simply, all deepfake abuses violate data integrity but not necessarily data security.

In foreign jurisprudence, data integrity issues are commonly applied to the collection of personal information and the subsequent errors made thereto.[47] For example, when an encoder of a utility company fails to indicate the correct information pertaining to a customer's payment, the customer's data integrity was compromised leading to damages.

The use of information with the intent to unlawfully modify the same is also a form of data integrity issue.[48] The unauthorized

[47] Ibid.
[48] Ibid

manipulation of one's facial map in deepfake abuse clearly falls under this type of data breach. The alteration of the data in the form of a summer get-away photo on social media posted by an unsuspecting teenager, when manipulated to appear as nude to humiliate her, is indubitably a violation of the girl's right to data integrity, among others.

C. Data Integrity and International Initiatives

This subsection surveys pertinent international laws in relation to the protection of rights in the use of technology, specifically the right to data integrity. It includes a discussion on several initiatives by different international bodies in the context of rights protection against cybercrime.

1. Articles 2, 4, 6, and 7 of the Budapest Convention on Cybercrime
2. ASEAN Declaration to Prevent and Combat Cybercrime
3. Data Protection Regulation
4. Article 3 of the United Nations Convention on the Rights of a Child (UNCRC) of 1989 for the Rights of Children to Special Protection
5. Article 17 of the European Convention on Human Rights (ECHR) for abuse of rights
6. Article 20 of the International Covenant on Civil and Political Rights (ICCPR)
7. The United Nations General Assembly of the Human Rights Council Resolution 38/7 (UN GA HRC/RES/38/7)

It was only in 2018 that the Philippines acceded to the Council of Europe's Convention on Cybercrime also known as the Budapest Convention on Cybercrime.[49] The Convention is a pioneer

[49] Council of Europe. (2018) Philippines joins the Budapest Convention. https://www.coe.int/en/web/cybercrime/-/philippines-joins-the-budapest-convention

international treaty that deals with crimes over the internet to be harmonized with domestic laws of its signatories. It entered into force in 2004. To date, it is the only binding multilateral agreement that addresses cybercrime.[50] This is a relevant measure on the part of the Philippines given the fact that Southeast Asian countries, in a 2020 Interpol report, are the key targets of cyberthreats.[51] Russia and China have yet to accede thereto.

As a signatory to the Convention on Cybercrime, the Philippines is mandated to take legislative and administrative measures at the national level to secure specific rights. In relation to the right to data integrity, the Convention defines the following forms of cybercrimes:

1. Illegal access is "committed intentionally, the access to the whole or any part of a computer system without right.[52]" the cyber-dependent form of deepfake abuse will clearly fall herein.[53]

2. Data interference is an act of "damaging, deletion, deterioration, alteration or suppression of computer data without right."[54]

3. Computer-related forgery is the deliberate and unauthorized "input, alteration, deletion, or suppression of computer data, resulting in inauthentic data with the intent that it be considered or acted upon for legal purposes as if it were authentic, regardless whether or not the data is directly readable and intelligible."[55]

---

[50] Benincasa, Eugenio. (2020) "ASEAN needs to enhance cross-border cooperation on cybercrime." Australian Strategic Policy Institute. https://www.aspistrategist.org.au/asean-needs-to-enhance-cross-border-cooperation-on-cybercrime/

[51] INTERPOL. (2020) INTERPOL report highlights key cyberthreats in Southeast Asia. https://www.interpol.int/en/News-and-Events/News/2020/INTERPOL-report-highlights-key-cyberthreats-in-Southeast-Asia

[52] Article 2, Budapest Convention on Cybercrime

[53] Ibid

[54] Article 4 of the Budapest Convention on Cybercrime:

[55] Article 7, Budapest Convention on Cybercrime

The Philippines also adopted the ASEAN Declaration to Prevent and Combat Cybercrime has been adopted in 2017.[56] It is the first cybercrime initiative by the ASEAN.[57] It recognizes the significance of mutual assistance in combating against cybercrimes through engaged coordination and cooperation of each member party with different ASEAN bodies.[58] It also mandates close cooperation relevant agencies such as Europol and Interpol for enhanced cyber security.[59] The Declaration, however, does not specify the rights to be protected.

In the European Union, the Data Protection Regulation requires that a receiving country of personal information must implement the required degree of data protection, otherwise the transfer of such data will not be allowed.[60] This right is sometimes referred to as the "right to be forgotten" as the personal information should not be kept, i.e. should be forgotten, if the level of required security in the receiving country is not met. The Data Protection Directive, however, only binds the members of the European Union.

The Rights of Children to Special Protection is provided under Article 3 of the United Nations Convention on the Rights of a Child (UNCRC) of 1989. The special protection for children in the use of the internet is straightforward. Given their tender age, they are prone to exploitation, misinformation, and abuse which can interfere with their well-being. In relation thereto, Article 3 of the UNCRC of 1989, or the "well-being clause", mandates the signatories to provide and ensure the protection and care of the children necessary for their well-being.

The Philippines ratified the UNCRC in 1990. The well-being contemplated in the well-being clause, of course, can take various forms. It should be conceivable that it includes the welfare of children

[56] Association of Southeast Asia Nation. Asean Declaration to Prevent and Combat Cybercrime. https://asean.org/wp-content/uploads/2017/11/ASEAN-Declaration-to-Combat-Cybercrime.pdf
[57] Benincasa (2021), ibid.
[58] ASEAN Declaration to Prevent and Combat Cybercrime (2017) https://asean.org/wp-content/uploads/2017/11/ASEAN-Declaration-to-Combat-Cybercrime.pdf
[59] Ibid.
[60] Rustad (2016), ibid.

in internet use. As deepfake technology can be used in cyberbullying, legislative and administrative measures that are required by Article 3 of the UNCRC should also contemplate such scenarios.

The protection of vulnerable persons online is also upheld in the European Convention on Human Rights (ECHR) through the European Court on Human Rights has declared as a positive duty of states to ensure the protection of vulnerable persons online, especially children. It calls on its member states to legislate for their welfare as they have to inevitably use the internet. This mandate of the ECHR had been upheld in several European Union cases such as in *Mouvement Raëlien Suisse v. Switzerland*[61] wherein the Court affirmed the restriction against the non-profit Mouvement to conduct online campaigns that promote, among others, geniocracy, sensual meditation, and human cloning linked to website of a cloning company. The Court ratiocinated that the combination of all the issues promoted are contrary to public health and moral and may thus be validly interfered with.

In *M.C. v. Bulgaria*[62], a complaint was filed against the state of Bulgaria for not complying with the ECHR to protect the physical and private well-being of children. The Court held Bulgaria violative of the ECHR for failing to incorporate into its criminal system the protection mandated.

Restriction of online content to protect the right of others is also part of the International Covenant on Civil and Political Rights (ICCPR). As much as freedom of expression is important, restriction of content under certain circumstances such racism and xenophobia is also required to protect the right of others.[63]

Also, the UN General Assembly in 2018 issued the Human Rights Council Resolution 38/7 (UN GA HRC/RES/38/7) for "the

[61] Mouvement Raëlien Suisse v. Switzerland, 2012-IV Eur. Ct. H.R. 373
[62] M.C. v Bulgaria , (39272/98) [2003] ECHR 646 (4 December 2003)
[63] UNODC (2021), ibid.

promotion, protection and enjoyment of human rights on the Internet.[64]" The resolution reaffirms the International Covenant on Economic, Social and Cultural Rights (ICESC) and the International Covenant on Civil and Political Rights (ICCPR). Among the rights enumerated in the HRC/RES/38/7 is the right from the spread of false information on the internet which are "designed and implemented so as to mislead, to violate human rights and privacy and to incite violence, hatred, discrimination or hostility.[65]" This mandate seems fit for the needed protection against deepfake technology abuses.

Based on the aforecited international laws and treaties, it can be observed that rights protection in relation to ICT is not comprehensive. In some cases, the rights are only implied. Nevertheless, progress was made with the definition of cybercrimes in the Budapest Convention on Cybercrime.

D. Data Integrity and Philippine Laws

Below is a list of cybercrime-dependent and cybercrime-enabled statutes in the Philippines arranged in the order of their date of enactment. The succeeding discussion will consider the relevance of each statute to the issue on data integrity, or the lack thereof.

1. R.A. No. 4200 or the Anti-Wire Tapping Law in 1965
2. R.A. No. 8792 or the E-Commerce Act in 2000
3. R.A. No. 9775 or the Anti-Child Pornography Act in 2009
4. R.A. No. 9995 or the Anti-Photo and Voyeurism Act in 2009
5. R.A. No. 10175 or the Cybercrime Prevention Act of 2012
6. R.A. No. 11449 or the Access Devices Regulation Act of 2019

[64] United Nations Human Rights Council. 38th Session (18 June – 6 July, 2018).
[65] Ibid.

Section 1 of the Anti-Wire Tapping Law prohibits "any person, not being authorized by all the parties to any private communication or spoken word, to tap any wire or cable, or by using any other device or arrangement, to secretly overhear, intercept, or record such communication or spoken word by using a device commonly known as a dictaphone or dictagraph or dictaphone or walkie-talkie or tape recorder, or however otherwise described."[66] The devices enumerated in the Section immediately suggests the antiquity of the statute. In the case of deepfake technology abuses, the Anti-Wire Tapping Law could apply if the deepfake includes a deepfake voice, which is conceivable. deepfake programs can map one's voice and project it to another person. A deepfake manipulator, however, can easily evade this wiretapping aspect by using data made publicly available, such as public posts of an intended victim on social media.

When it comes to the Access Devices Regulation Act of 2019, which is the new version of its 1998 counterpart, ICT-related violations were committed against the banking system.[67] The law is relevant in cases of automated teller machine hacking or credit card skimming. It is therefore not relevant, in any way, to the disinformation technology issues such as in the case of deepfakes. Neither is the E-Commerce Act in 2000 which deals with electronic documents and electronic signatures. Although both of these laws consider data integrity, neither is relevant nor applicable to the deepfake dilemma which involves multimedia contents.

The Anti-Child Pornography Act, meanwhile, was enacted pursuant to the constitutional mandate upholding "the vital role of the youth in nation-building."[68] The law involves ICT in terms of the transmission, distribution, or broadcast of child pornography.[69] Mere

[66] Section 1, Anti-Wire Tapping Law
[67] Dela Cruz, Abet. (2019) "Was Access Devices Regulation Act reboot really necessary?" The Manila Times. https://www.manilatimes.net/2019/10/02/opinion/columnists/topanalysis/was-access-devices-regulation-act-reboot-really-necessary/624758/
[68] Section 13, Article II, 1987 Philippine Constitution
[69] Anti-Child Pornography Act

possession of child pornography is also punishable. Given the fact that majority of the deepfake abuses are in the form of pornographic videos, this law may play a role therein.

However, the aforecited law is clearly applicable only when the deepfake video involves child pornography. Does a minor's facial map projected on to a porn actress in a pornographic video constitute child pornography? Technically, the deepfake video will not involve a body of the minor nor will the minor be actually engaged in any sexual act. Section 3 (b) of the Anti-Child Pornography Act defines child pornography as "any representation… of child engaged or involved in real or simulated explicit sexual activities."[70] Given that the hypothetical minor did not actually engage in any sexual activity, only that her facial features were projected onto the pornographic performer, will the deepfake video fall as child pornography?

The same dilemma may be raised when relating the deepfake issues to the Anti-Photo and Voyeurism Act wherein photo and video voyeurism is defined as an "act of taking photo or video coverage of a person or group of persons performing sexual act or any similar activity or of capturing an image of the private area of a person or persons without the latter's consent…"[71] Given that the person in the deepfake video did not actually perform the sexual act as depicted in the video but whose facial map was only used to make the actual pornographic performer appear as the victim, will it constitute voyeurism? Another question is whether or not the deepfake processing is an act of "taking" a photo or video. It is not surprising, of course, that the law is not apprised with a technology which emerged eight years after it was enacted.

When it comes to the Cybercrime Prevention Act of 2012, most supporters of the law viewed its benefits in the context of commerce

[70] R.A. No. 9775 or the Anti-Child Pornography Act
[71] Section 3, R.A. No. 9995 or the Anti-Photo and Video Voyeurism Act of 2009

especially when it comes to foreign investment.[72] The said law provides for six categories of cybercrimes. Among which is defined under Section 4 (a) referring collectively to "offenses against the confidentiality, integrity and availability of computer data and systems."[73] The list of specific offenses enumerated therein exactly resemble those in the Budapest Convention on Cybercrime, only much shorter.

The Philippine version of the Cybercrime Convention copied the verbatim definition of "data interference", with an added phrase that the same act includes the transmittal of computer viruses. This is consistent with the intent of the framers of the Cybercrime Convention for including data interference as a cybercrime: to protect the "integrity and the proper functioning or use of stored computer data or computer programs."[74] Under contemplation, therefore, is the protection of data systems such as computer networks against attacks that will render them either non-functional or dysfunctional, as exactly what happened with the I LOVE YOU virus in 2000. Viewed in the context of pornographic deepfakes, however, the act does not squarely apply; no damage to a computer system is involved at all. Instead, the data was damaged to the detriment not of a computer system but of a natural person. Indeed, this distinction requires more legislative attention.

As to the cybercrime of illegal access, on the other hand, a deepfake video that used publicly available data of an individual such as his or her public photos and videos on social media will not apply. In other words, data integrity in deepfakes may be breached without violating data privacy. As it is, illegal access is clearly linked to data privacy rather than data integrity. Corollarily, in *Vivares v. St. Theresa's College*, the Supreme Court held that "information, otherwise private, voluntarily surrendered by them can be opened, read, or copied by

[72] Heffron, James Keith. (2014). The Philippine Cybercrime Prevention Act of 2012: To Protect or Destroy?DLSU Business & Economics Review 24.1 (2014), pp. 96-103

[73] Section 4 (a), R.A. No. 10175 or the Cybercrime Prevention Act of 2012

[74] Explanatory Note of the Cybercrime Convention, p. 11. Available at https://rm.coe.int/16800cce5b, accessed 15 March 2021

third parties who may or may not be allowed access to such."[75] Necessarily, when a publicly-accessible media was used to create the deepfake, there was no illegal access committed. As the *Vivares* ruling further held, even when the privacy setting of a social media post was modified to "Friends Only," as long as others can tag the photo thereby allowing other people to see it, is not absolutely private.

Perhaps, upon reading all the cybercrimes in the Cybercrime Prevention Act patterned after the Budapest Convention, the closest cybercrime in relation to disinformation technology such as in deepfakes is computer forgery. This pertains to the "*input, alteration, deletion, or suppression of computer data, resulting in inauthentic data* with the intent that it be considered or acted upon for legal purposes as if it were authentic, regardless whether or not the data is directly readable and intelligible"[76] (emphasis added).

However, in the Explanatory Report of the Cybercrime Convention which reflects the intent of the framers, the crime of computer forgery contemplated therein is a "parallel offense to tangible documents."[77] The report explained that the provision on computer forgery "covers data which is the equivalent of a public or private document, which has legal effects"[78] (emphasis added). The provision "aims at filling gaps in criminal law related to traditional forgery."[79]

Therefore, an important question is whether images and videos subject to disinformation technology such as deepfakes can be considered as "documents with legal effects." Apparently, based on the Explanatory Report, the Cybercrime Convention contemplates a scenario wherein a document with legal effects is modified in order to

[75] Vivares v. St. Theresa's College, G.R. No. 202666, September 29, 2014
[76] Section 4 (b) (1), Cybercrime Prevention Act
[77] Explanatory Report of the Convention on Cybercrime, p. 18, available at https://www.oas.org/juridico/english/cyb_pry_explanatory.pdf, accessed 5 March 2021
[78] Ibid.
[79] Ibid.

change its evidentiary value, only this time it is made electronically rather than on paper. An example would be a digital manipulation of a death certificate to feign one's death. This obviously has legal effects. But if the image or video of the same person was manipulated to make him appear dead, perhaps a deepfake video of a funeral scene with the said person's face superimposed on the actual corpse, does this have the same forgery effect as the former example?

The ambiguity also arises with the definition of "computer data" which, under Section 3 (e) of the Cybercrime Prevention Act of 2012 patterned after Article 1 (a) of the Cybercrime Convention, is defined as "any representation of facts, information, or concepts in a form suitable for processing in a computer system"[80] (emphasis added). Do images and videos posted online constitute as representation of facts, information, or concepts suitable for processing in a computer system? The herein ambiguity must be read in consonance with the use of the phrase "computer data" in computer forgery and the spirit of the law in defining such crime as manifested in the Cybercrime Convention Explanatory Report.

Nevertheless, the principle of *in dubio pro reo* (when in doubt, for the accused) will apply when it comes to ambiguity of a penal provision. When the law is ambiguous, the court must rule in favor of the accused. This is due to the presumption of innocence. However, this does not preclude Congress from establishing a rebuttable presumption of guilt, "provided there be a rational connection between the facts proved and the ultimate fact presumed".[81]

The rebuttable presumption of innocence in favor of the accused in this context only further highlights the issue of rights protection on the part of the victim. It therefore remains a quandary as to how the liberty and prosperity of the Filipinos may be protected and nurtured

[80] Section 3 (e) of the Cybercrime Prevention Act of 2012 patterned after Article 1 (a) of the Cybercrime Convention

[81] Regalado, Florenz. (2008). Remedial Law Compendium, p. 723. Manila: Anvil Publishing.

when laws are inadequate, silent, or ambiguous when it comes to rights violation due to emerging technologies such as in AI-enabled disinformation.

III. "JURISPRUDENTIAL NORMS WITHOUT PRECEDENCE"

Among the epochal implications from the intimate connection between law and technology is the need for a judiciary to be attuned with globalization:

> It is obvious that the gigantic strides in life sciences and life technologies will change human behavior and social interaction. That is certain. These resulting alterations will, in turn, require new modes of governance and, for us in the judiciary, ***new jurisprudential norms without precedence***…[82] (emphasis added)

This Chapter views "new jurisprudential norms without precedence" as an empowering notion in rights protection where laws are obscure, silent, or inadequate. When laws cannot keep up with technology, the judiciary remains on guard in rights protection and enforcement.

A. Judicial Decision-Making: Nature and Approaches

Case law is also referred to as "jurisprudence" which came from the Latin word *juris prudentia,* meaning "the knowledge or science of law."[83] The application of case law in other jurisdictions, includes the following functions: (1) "Interpretation" in case of ambiguity of laws as applied in a specific controversy; (2) "Substitution" when the law is silent or obscure; (3) "Adaptation" in case of obsolete laws which hare no longer applicable to a certain controversy hence the need for a judicial decision-making which adapts with the contemporary needs

[82] Panganiban, Artemio. (2003). The Bio-age Dawns on the Judiciary, p. 7. Manila: Rex Bookstore.
[83] Cohen-Tanugi, Laurent. (2016) "Case Law in a Legal System Without Binding Precedent: The French Example." Stanford Law School Traditional Commentary No. 17. Available at https://cgc.law.stanford.edu/commentaries/17-laurent-cohen-tanugi/, accessed in March 3, 2021.

of the people; and (4) "Harmonization" where the court observes uniformity in interpreting laws.[84]

In the Philippines, as early as 1935, the Supreme Court distinguished liberal statutory construction and judicial legislation. The former is a legitimate exercise of judicial power while the latter is proscribed given the separation of powers.

> "By liberal construction of statutes, courts from the language use, the subject matter, and the purposes of those framing them are able to find their true meaning. There is a sharp distinction, however, between construction of this nature and the act of a court in engrafting upon a law something that has been omitted which someone believes ought to have been embraced."[85]

In relation to this dichotomy, American jurist Jack Day argued in "Why Judges Must Make Law" that legislation is not only an important aspect of making judicial decisions but is contemplated within the framework of common law in order to address societal distress. He however refers to this not as judicial legislation but "judicial creativity."[86] Perhaps the most sensible assertion in the article is Judge Day's claim that only when the necessity and limitations of judicial creativity are recognized will we be able to safeguard the public from "judicial excesses."[87]

One way to recognize these limitations is to examine established modes of interpretation. For example, the Supreme Court, in *Poe-Llamanzares v. Commission on Elections*, juxtaposed originalism with

[84] Ibid.
[85] Tañada v. Yulo, G.R. No. L-43575, May 31, 1935
[86] Day, Jack. (1976). "Why Judges Must make Law". Case Western Reserve Law Review, vol. 26, no. 3. Available at: https://scholarlycommons.law.case.edu/caselrev/vol26/iss3/3, accessed on 14 March 2021
[87] Ibid, p. 563.

functionalism. An originalist confines an interpretation solely on the text of the Constitution along with the intent of its framers.[88] This approach ramifies into textualism and intentionalism. The former is focused on understanding the text through the original public meaning, while the latter is concerned with the intention of the framers.[89] On the other hand, a functionalist interpretation foreground pragmatic considerations such as the efficacy of the law.[90]

These are but only two of the several other common modes of judicial interpretations. Further, the two can be viewed not in contradiction but as complementary. With a functionalist lens, a provision will be interpreted so as to render the law effective. This is ideally coupled with the intent of the framers within the context of originalism.

By not confining interpretative modes in a single school of thought, the Constitution will become a "living constitution" as described by Justice Oliver Wendell Holmes in *Missouri v. Holland.*[91] Further, as Chief Justice Artemio Panganiban described the approach, jurists are viewed as "not mere social technicians and legal automatons. Rather, they are social engineers who courageously fix their gaze on the underlying principles and overarching aspirations of the Constitution to nurture a free and prosperous nation."[92]

Other modes of judicial interpretation include the following: moral reasoning, structuralism, and historical approach.[93]

---

[88] Poe-Llamanzares v. Commission on Elections, G.R. Nos. 221697 & 221698-700 (Concurring Opinion), March 8, 2016

[89] Ibid.

[90] Ibid.

[91] Missouri v. Holland, 252 U.S. 416 (1920)

[92] Panganiban, Artemio. (2014a). "Safeguard Liberty, Conquer Poverty, Share Prosperity." Delivered during the Luncheon Fellowship of the Philippine Bar Association held at the Tower Club, Makati City on March 26, 2014. Available at https://cjpanganiban.com/2014/03/26/safeguard-liberty-conquer-poverty-share-prosperity-2/, accessed 7 March 2021

[93] Murrill, Brandon. (2018). Modes of Constitutional Interpretation. Congressional Research Service. https://fas.org/sgp/crs/misc/R45129.pdf, accessed on March 8, 2021.

Structuralism is an approach that highlights the structure or relationship between different branches of the government. This was applied in a US case, *Immigration and Naturalization Service v. Chadha*[94], where the Supreme Court held that power structures embodied in the US Constitution prohibits a "one-house legislative veto."[95]

The historical approach, on the other hand, has been applied in numerous cases. In *Cruz v. Secretary of Environment and Natural Resources,* for instance, it was held that "pragmatic jurisprudence must come to terms with history."[96] The approach was applied to "correct a grave historical injustice" against the indigenous peoples of the Philippines.[97] The same was applied in *Esso Standard Eastern, Inc. v. Commissioner of Internal Revenue*, where the Supreme Court affirms the relevance of examining legislative history when it comes to resolving doubt and ambiguity in a statute. As a caveat, however, the Supreme Court also emphasized that resort thereto should only be "for the purpose of solving doubt, not for the purpose of creating it."[98]

Academic discussions on the nature of judicial decision-making also involves the debate on whether or not moral arguments are necessary in adjudication. For instance, American jurist Ronald Dworkin argued that the use of moral arguments is necessary in adjudication especially when constitutional rights are involved since provisions granting the same can be abstract.[99] He cited as an example the Due Process Clause where the US Constitution, by not citing specific instances, is viewed to allow the members of the bench to decide as to what circumstances will give rise to such right. The rationale for Dworkin's theory is that the rights ought to be protected

[94] Immigration and Naturalization Service v. Chadha, 462 U.S. 919 (1983).
[95] Ibid.
[96] Cruz v. Secretary of Environment and Natural Resources (Separate Opinion), G.R. No. 135385, December 6, 2000
[97] Ibid.
[98] Esso Standard Eastern, Inc. v. Commissioner of Internal Revenue, G.R. Nos. L-28508-9, July 7, 1989
[99] Dworkin cited in Wenz, Peter. (1998) "Dworkin's Wishful-Thinkers Constitution." 20th World Congress of Philosophy, in Boston, Massachusetts from August 10-15, 1998, available at https://www.bu.edu/wcp/Papers/Law/LawWenz.htm, accessed March 15, 2021

cannot be enumerated ahead of the circumstance or controversy hence judicial interpretation may extend it to other matters not specifically cited in the laws[100].

Other legal luminaries, however, disagree with Dworkin's theory. The US Supreme Court Justice Hugo Black, for instance, asserted that Dworkin's morality-based perspective could lead to a violation of the separation of powers as judges can have the power to invalidate laws enacted by the legislative if it counteracts with their moral beliefs.[101] As articulated in *Griswold v. Connecticut*, Dworkin's morality-based approach could lead to a dangerous scenario where the legislative branch will be "held hostage to the strongly held moral convictions of the justices of the Supreme Court."[102]

Nevertheless, interpretation inevitably involves judgment. The question therefore is not whether moral judgment is involved in adjudicating cases, rather it is a question of degree.[103] Since the courts are not elected by the people, it is but imaginable that certain issues (e.g. policies for the economy) and substantive rights are better pondered and debated in legislative venues. The question of degree can be addressed by a check and balance system, such as the well-established separation of powers.[104]

In "How Cases are Decided", Chief Justice Panganiban explained that contrary to the practice of US Justices of voting along philosophical leanings, i.e. liberal as opposed to conservative, the Philippine Supreme Court Justices do not necessarily vote based on an ideological line.[105] For Chief Justice Panganiban, the most ideal means

[100] Ibid.
[101] Ibid.
[102] *Griswold v. Connecticut* 381 U.S. 479 (1965)
[103] Wentz, Peter. (1998) "Dworkin's Wishful-Thinkers Constitution." 20th World Congress of Philosophy, in Boston, Massachusetts from August 10-15, 1998
[104] Ibid
[105] Panganiban, Artemio. (2015). "How Cases are Made". With Due Respect. Philippine Daily Inquirer

of judging cases is on their merit. Further, to be worthy of public trust, the Supreme Court must also be impervious to what Chief Justice Panganiban refers to as the "plague of ship": kinship, relationship, friendship, and fellowship.[106]

B. Liberty-Prosperity Nexus as a Judicial Philosophy

The liberty-property nexus is a judicial philosophy by Chief Justice Artemio Panganiban since he served as the chief magistrate of the Philippine Supreme Court in 2005. The framework is an embodiment of the indivisibility of two sets of rights as the twin beacons of justice: political liberty and economic prosperity. As Chief Justice Panganiban concisely put it, "justice and jobs; freedom and food; ethics and economics; democracy and development; liberty and prosperity must always go together. One is useless without the other."[107]

The impetus of this framework consists of different significant global events as succinctly outlined by Chief Justice Panganiban in his keynote address entitled "Safeguarding the Liberty and Nurturing the Prosperity of the Peoples of the World."[108] Among which is the adoption of the Universal Declaration of Human Rights (UDHR) in 1948 that upholds the right of the general public to liberty and prosperity. Further, the 1987 Philippine Constitution mandates a "just and dynamic social order that will ensure the prosperity" of the country and its people.[109]

---

[106] Panganiban, Artemio. (2020). "A Supreme Court worthy of public trust". With Due Respect. Philippine Daily Inquirer, July 12.
[107] Supra, note 105.
[108] Panganiban, Artemio. (2014b). " Safeguard Liberty, Conquer Poverty, Share Prosperity (Part Three — for the the Business Community), 4th Integrity Summit with the Makati Business Club and the European Chamber of Commerce and Industry, at Dusit Thani Hotel, Makati City.
[109] Section 9, Article II, 1987 Philippine Constitution

Another impetus of this judicial philosophy were the developments in non-governmental, private sectors mainly through the philanthropic initiatives of financial and civic leaders.[110] The pooling of resources in the war against poverty foregrounds the recognition of the common people's right to economic prosperity.

Equally important is the call for a stable judiciary that steadfastly upholds the rule of law in order to protect and achieve liberty and prosperity of the people. For Chief Justice Panganiban, a "well-functioning judicial system" is one that protects the political liberties of the people and empowers them to assume key roles in the country's economic development.

In view of these impelling forces, the liberty-prosperity nexus as a judicial philosophy is reflective of two important standards of judicial review. First is the emphasis on social justice which Justice J.P. Laurel provided an oft-cited characterization in *Calalang v. Williams*: "the humanization of laws and the equalization of social and economic forces by the State so that justice in its rational and objectively secular conception may at least be approximated."[111] Second is the judicial deference of economic development and prosperity issues to the executive and legislative branches of the government.[112]

As Chief Justice Panganiban proffered, the judicial deference to the executive and legislative branches when it comes to economic policies and issues is not, in any way, an abdication of the constitutional duty to determine grave abuse of discretion.[113] No less than the 1987 Philippine Constitution embodies the "activist mandate" in expanding the power of the Court in judicial review as enshrined in

[110] Ibid.
[111] Calalang v. Williams, G.R. No. 47800 December 2, 1940
[112] Supra, note 124.
[113] Ibid.

Sec. 1, Article VIII of the 1987 Philippine Constitution[114]. The judicial power to decide cases involving allegations of "grave abuse of discretion amounting to lack or excess of jurisdiction."[115] It was a historical product of the decades-long dictatorship of former President Ferdinand Marcos. This expanded judicial review is in contrast with judicial powers in other jurisdictions such as in the US which was only granted impliedly.

Essentially, the relevance of liberty and prosperity as twin beacons of justice can only be achieved under the rule of law. As Chief Justice Panganiban explained, "authoritarian rule was proven to be incapable of producing meaningful long-term economic progress… Indeed, the Filipinos may endure occasional hunger, but they will never tolerate injustice and indignity for long(emphasis added)."[116]

This implies that the framework not only contemplates the means of protecting or giving rise to liberty and prosperity but equally envisions the need to maintain and perpetuate them. The protection and perpetuation of liberty and prosperity form part of the indivisible foundation of the judicial philosophy.

Therefore, viewed in light of the potential human rights violation that could likely be brought about by emerging technologies not yet contemplated by laws, the liberty-prosperity framework in judicial interpretation is highly important. When it comes to data integrity issues, for example, the concern should equally take into account the political liberty of the general public and their economic prosperity. When liberty is deprived, a person loses a valuable ground for economic growth.

---

[114] Melencio-Herrera, Ameurfina. (2009). "Perspectives in Judicial Education: Selected Speeches and Writings." Philja Judicial Journal, vol. 1, issue 3.
[115] Section 1, paragraph 2, Article VIII, 1987 Philippine Constitution
[116] Supra, note 124.

When it comes to weaponized deepfakes, especially in derogation of women's reputation, at stake are their social and political standing in their respective communities which are intimately connected with their economic access. If a female teacher is sabotaged by an envious co-worker who deepfakes a pornographic video of the former causing her dismissal, the dismissed teacher not only had to grapple with the fact that the deepfake video may hardly be proven as a fake, but she also loses her honor, her livelihood, and all other factors necessary for her well-being.

Necessarily, therefore, amid the gaps between Philippine laws and emerging technologies, victims resort to the judiciary for rights protection and enforcement. This is when the liberty-prosperity philosophy is crucial. The judiciary, in its interpretation, should cogitate proportionately the liberty and prosperity of the complainant in the formulation of new jurisprudential norms without precedence.

IV. THE TWO-PRONGED APPROACH

Having established the pertinence of the liberty-property nexus in jurisprudential norms without precedence, this Chapter addresses the key issue of the research: in view of the statutory mandate that inadequacy or silence of laws should not impede judicial decisions, how then can the judiciary protect the liberty and nurture the prosperity of Filipinos amid the obscurity of technology-related laws? The two-pronged approach outlined in this Chapter elaborates on Chief Justice Panganiban's call for "new jurisprudential norms without precedence" which highlights on the importance of and the challenges to the judiciary when it comes to adjudicating new-age controversies.

A. Academic prong: source-norm dichotomy

Jurisprudential norms must not amount to judicial legislation. Legislation falls within the constitutionally allocated sphere of the legislative branch. If there is inadequacy, obscurity, or silence of laws that protect data integrity issues arising from disinformation technology such as deepfakes, how should the line be drawn then between judicial interpretation, or what Judge Day referred to as "judicial creativity,"[117] and judicial legislation?

Hence the relevance of the source-norm dichotomy. This binary approach has two basic tenets. First is the recognition of the distinction between sources of law such as the statutes, jurisprudence, customs and the legal norms which arise from interpretation as a separate source. Second is the recognition of the role of interpretation as an "intermediary between source and norm."[118]

[117] Supra, note 98.

[118] Shecaira, Fábio. (2014). "Sources of Law Are not Legal Norms," p. 4. The International Journal of Jurisprudence and Philosophy of Law. https://doi.org/10.1111/raju.12053

The "sources of law" are primarily texts from law-making bodies, and by extension, the case law of the Supreme Court of the Philippines in view of Article 8 of the Civil Code of the Philippines. These sources are issued by primary legal authority which are the following: (1) the legislative body in the form of statutes; (2) the judiciary in the form of jurisprudence; (3) administrative agencies through the issuance of Implementing Rules and Regulations; (4) local government units through ordinances; and (5) the President through executive orders and presidential decrees.[119]

It is worth noting that not all decided cases may serve as case law. In fact, it is the Supreme Court itself which may declare so. In *Marcos v. Manglapus,* the Supreme Court held that the ruling therein "should not create a precedent, for the case of a dictator forced out of office and into exile after causing twenty years of political, economic and social havoc in the country and within the short space of three years seeks to return, is in a class by itself."[120] In other cases, meanwhile, such as in *Philippine Guardians Brotherhood, Inc. v. COMELEC*, the court abandoned a previous ruling on the ground that it is "clearly an erroneous application of the law — an application that the principle of stability or predictability of decisions alone cannot sustain."[121]

Apropos, albeit what law practitioners often referred to as "flip-flopping" decisions in jurisprudence, the supremacy of the Supreme Court as the court of last resort remains. This was pithily articulated in an oft-cited concurring opinion of US Supreme Court Justice Robert Jackson in *Brown v. Allen*: the Supreme Court is not final because it is infallible; it is infallible because it is final.[122] The power of the Supreme Court over all other courts does not necessarily mean that Supreme Court decisions were necessarily wiser than those made by lower

[119] Ng, Po, and Po. (2007). Legal Research and Bibliography. Manila: Central Books Supply.
[120] Marcos v. Manglapus, G.R. No. 88211, September 15, 1989
[121] Philippine Guardians Brotherhood, Inc. v. COMELEC, G.R. No. 190529 (Resolution), April 29, 2010
[122] Brown v. Allen - 344 U.S. 443, 73 S. Ct. 397 (1953)

courts; rather, it is because the Constitution entitled the Supreme Court "to the last guess on the matter."[123]

Furthermore, in adjudicating controversies which were yet to be contemplated by legislation and were not yet previously decided by the Court, the judiciary cannot supply or supplant what is missing in law or jurisprudence else it will amount to judicial legislation.[124] Gaps in statutes are to be filled not by the judiciary but by the legislature who, in a democracy, the people elected to do so.[125] On the part of the judiciary, legal norms are formed instead.

Legal norms arise from the application of certain modes of interpretation. Civil law commentator Justice Edgardo Paras refers to this as "judicial customs" which are decisions that the Supreme Court made despite the absence of applicable statutes or customs.[126] When the judiciary make decisions notwithstanding the silence or inadequacy of relevant laws, a textualist legal norm resort to canons of interpretation to address the controversy, whereas non-textualists tend to resort to legislative history.[127] American jurist Frank Easterbrook defends the use of the former over legislative history in the following wise: "Relying on text does the least harm, for the text is visible to everyone, while legislative history can take people by surprise."[128]

Needless to say, there can be different legal norms that may be reasonably inferred from the same set of legal provision depending on

---

[123] US Senate Committee on the Judiciary. (1969). "Nonjudicial Activities of Supreme Court Justices and Other Federal Judges." Washington: US Government Printing Office.
[124] Kilusang Mayo Uno v. Aquino, G.R. No. 210500, April 2, 2019
[125] Supra, note 134, p. 13.
[126] Paras, Edgardo. (2008). Civil Code of the Philippines Annotated, 16th edition. Manila: Rex Bookstore.
[127] Easterbroook, Frank. (2017). "The Absence of Method in Statutory Interpretation." The University of Chicago Law Review, vol. 84, no. 81. Available at https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=12684&context=journal_articles, accessed March 15, 2021.
[128] Ibid.

the point of view of a textualist, a pragmatist, or other lenses.[129] This shows that jurisprudential norms without precedence may clearly be set apart from judicial legislation through an emphasis on the modes of interpretation.

The liberty-prosperity framework may then be weaved in the formation of legal norms through a highlight on the interdependence of political liberty and economic prosperity. Specifically, this can be made through an emphasis on social justice as applied in numerous Supreme Court decisions. As the oft-quoted slogan of former President Ramon Magsaysay put: "those who have less in life should have more in law."[130]

Further, in line with the liberty-prosperity paradigm, legal norms are also important in view of deferential interpretation in deciding economic cases that fall within the expertise of the executive and legislative branches. As Chief Justice Panganiban repeatedly holds, adjudication of controversies involving the economy must generally involve judicial deference to the political branches as a means for the judiciary to contribute to economic growth.[131]

The deferential interpretation contemplates exceptions, of course, such as when there is grave abuse of discretion and when human rights and liberty are involved.[132] Thus, in *Tañada v. Angara*, the Supreme Court held that the Constitution "recognizes the need for business exchange with the rest of the world on the bases of equality and reciprocity, and limits the protection of Philippine enterprises only against foreign competition and trade practices that are unfair."[133]

---

[129] Supra, note 134, p. 3.
[130] Del Rosario v Delos Santos, G.R. Nos. L-20589-90, March 21, 1968
[131] Panganiban, Artemio. (2012). "How the Judiciary can Help the Economy." With Due Respect. Philippine Daily Inquirer, September 8. Available at https://opinion.inquirer.net/36306/how-the-judiciary-can-help-the-economy, accessed 7 March 2021.
[132] Ibid.
[133] Tañada v. Angara, G.R. No. 118295 May 2, 1997

In sum, the source-norm dichotomy recognizes the distinction between legal sources and legal norms. The distinction is relevant in delineating judicial interpretation from judicial legislation. It is through legal norms that the judiciary may adjudicate cases involving emerging technologies. Applying the liberty-prosperity framework, deferential interpretation in economic policies as well as the emphasis on social justice are highlighted. Prescinding from these premises, the academic prong proves that the judiciary can efficiently protect the political liberty and nurture the economic prosperity of the Filipinos amid data integrity issues and other risks brought about by emerging technologies, notwithstanding the silence, obscurity, or inadequacy of Philippine laws.

B. Pragmatic Prong: Judicial Globalization

In articulating the effects of technological advancements vis-à-vis law and judicial doctrines, Chief Justice Panganiban aptly pointed out that "the need of the hour is to balance national interest with international survival… the specific task is to find out how globalization has affected judicial decision-making on the national level"[134] (emphasis added).

Judicial globalization is also referred to as "world constitutionalism" or "international judicial cooperation."[135] The phrase was made famous by international lawyer and foreign policy analyst Anne-Marie Slaughter in her book *A New World Order*. Among of the key themes in judicial globalization are as follows: the adoption of international law and foreign jurisprudence in domestic laws; meeting of judges with their foreign counterparts; and mutual

[134] Panganiban, Artemio. (2003). "Judicial Globalization." Lecture delivered by Supreme Court Justice Artemio V. Panganiban before the First Australasia Judicial Educators Forum (AJEF) on February 14, 2003 at the New World Renaissance Hotel, Makati City.
[135] Ibid, p. 4.

cooperation of foreign jurisdictions in cases involving complex international disputes.[136]

The adoption of foreign case law or the so-called "judicial borrowing" is not uncommon in Philippine jurisprudence. Foremost in the reasons therefor is the fact that many of the Philippine statutes were patterned after foreign laws including the 1987 Constitution's Bill of Rights which substantially resembles the US Bill of Rights. Hence, although not binding, foreign jurisprudence is persuasive in the Philippines. Other countries which also practice substantial judicial borrowing include India, Hong Kong, South Korea, Zimbabwe, and Canada.[137]

An unfortunate juxtaposition, however, leads to a the opposition between judicial globalization and democratic self-government.[138] The latter approach argues that domestic laws are more faithful to the will of the people.[139] It generally appears that siding with one inevitably compromises the other. The binary opposition, however, is not nuanced enough as it creates a simplified black-and-white dichotomy. Judicial globalization need not be viewed as anti-nationalism. Rather, it can be viewed as a form of growth, a kind of nationalism that identifies with a larger, transnational community rather than that which scuffles in isolation.

Another landmark case for judicial globalization is *Tañada v. Angara*. The Supreme Court unanimously ratified the membership of the Philippines in the World Trade Organization thereby adopting its policies in trade liberalization, privatization, and deregulation.[140] At that time, the "Filipino First" economic policy in the 1990s was

[136] Flaherty, Martin. (2011). "Judicial Globalization in the Service of Self-Government". Ethics and International Affairs, vol. 20 , no. 4 , December 2006 , pp. 477 – 503
[137] Ibid.
[138] Supra, note 150, p. 480.
[139] Supra, note 150.
[140] Supra, note 147.

prevailing. There is, however, a need to "abandon isolationist policies and to embrace the new 21st-century economic doctrines."[141]

Also pivotal in examining the impetus of judicial globalization was the emergence of human rights following the end of World War II.[142] International human rights law became foundational elements in foreign affairs. Concomitantly, this gave rise to the establishment of transnational organizations such as the United Nations (UN), the European Union (EU), North Atlantic Trade Organization (NATO), World Trade Organization (WTO), among others. International events unmistakably affect laws and judicial decisions such as in the case of terrorism, which is "undeterred by territorial boundaries."[143] There is therefore a need for a judiciary that is attuned with international best practices.

Further, in the context of paucity, silence, or obscurity of Philippine laws, judicial globalization proves highly relevant in the protection of human rights as it promotes a judiciary that is not recluse but is instead adaptable with international judicial norms and jurisprudence. With the increasing threats of "global crimes" perpetrated through internet, engagement and cooperation between and among judicial systems become more crucial than ever.

When it comes to international policies for the protection against cybercrimes, for instance, it is evident that European organizations such as the European Union and the Council of Europe have already enacted advanced policies such as the Data Protection Regulation, the pioneering Convention on Cybercrime, and other specific European Data Protection Laws. These anti-cybercrime measures may serve as helpful international and comparative materials, among others, that will contribute in establishing productive transnational judicial meetings and conferences.

---

[141] Supra, note 147.

[142] Supra, note 150.

[143] Panganiban, Artemio. (2002). Reforming the Judiciary, pp. 374-375. Manila: Supreme Court Press.

Apropos, judicial globalization reinforces the significance of the rule of law. This will not only facilitate improved international consensus through congenial international affairs but also promote a greater judicial stability in the form of a global order founded on the rule of law.[144]

[144] Supra, note 150, p. 503.

V. GOING FORWARD: OPPORTUNITIES AND CHALLENGES AMID GAPS BETWEEN LAW AND TECHNOLOGY

A. Challenge for the Judiciary: International Engagement

International engagement between and among judicial systems is very important especially with the threats of a "globalization of crime."[145] For any judicial system, international cooperation is beneficial in numerous ways such as in the following areas: (1) data exchange; (2) expansion of comparative legal knowledge; (3) access to direct information regarding international legislative and judicial best practices; (4) mutual assessments of necessary reforms, among others.[146]

The perennial issue of clogged dockets may also benefit from judicial engagement. Chief Justice Panganiban cites 3Ms as sources thereof: "men, money and machines."[147] Apropos, as the Chief Justice reiterates in several of his writings, when it comes to the issue on the men of the judiciary, i.e. judges and justices, there are four important INs of an ideal judge: "INtegrity, INdependence, INtelligence and Industry."[148] All of these four INs play a role in this perennial problem. Of the four INs, international engagement benefits intelligence.

In light of the obsolete nature-nurture debate in cognitive psychology, intelligence is not only about heredity but is also about one's social environment.[149] It may be inferred therefore that intelligence, as one of Chief Justice Panganiban's INs of a good judge, does not contemplate a fatalistic feature but a trait that may be

[145] Soto, Juana. (2019). "Towards a new model of international judicial cooperation." Available at https://www.elpaccto.eu/en/towards-a-new-model-of-international-judicial-cooperation/ , accessed 15 March 2021.
[146] Ibid.
[147] Panganiban, Artemio. (2017). "Speeding up quality justice (1)". With Due Respect. Philippine Daily Inquirer, December 24, 2017. Available at https://opinion.inquirer.net/109696/speeding-quality-justice-1, accessed 7 March 2021.
[148] Ibid.
[149] Pinker, Steven. (2004). "Why nature and nurture won't go away." Daedalus, vol. 133, no. 4, pp. 4-17. Available at https://dash.harvard.edu/handle/1/3600799, accessed 15 March 2021

continually developed. And, pragmatically, more exposure and engagement in international trainings and seminars will help expand the judicial knowledge of the men of the judiciary. The significance thereof is important in increasing efficiency especially in adjudicating cases involving new-age technologies. Hence, this can contribute, to a certain degree, in unclogging court dockets.

This also underscores the role of the Philippine Judicial Academy (PHILJA) as the institutionalized training ground for the members of the bench. Among the institution's objectives is to develop "networking and partnership with other institution[150]". Currently, PHILJA's international engagements includes electronic linkage with the Commonwealth Judicial Education Institute to facilitate exchange of judicial education resources. It also collaborates with international organizations such as the Asian Development Bank (ADB), The Asia Foundation (TAF), and United States Agency for International Development (USAID).[151]

The Supreme Court of the Philippine have also pursued different forms of international engagements. It has been two decades ago when the pilot modernization and process management project was initiated in collaboration with the American Bar Association and USAID.[152] The project aimed to address the issue on clogged dockets.

Among exemplary feats in this regard is the International Conference and Showcase on Judicial Reforms (ICSJR) in 2005 during the incumbency of Chief Justice Hilario Davide. It was a pioneer

[150] Ibid.

[151] Candelaria, Sedfrey. (2005). "PHILJA Linkages." Delivered at the Ninth Lecture, Chief JustIce Hilario G. Davide, Jr. Distinguished Lecture Series, on "The Commitment to Judicial Education - A Presentation;' on September 29,2005, at San Beda College, Mendiola, Manila.

[152] American Bar Association. (2011). "Philippine Supreme Court Launches a Pilot Process Management Project." Available at https://www.americanbar.org/advocacy/rule_of_law/where_we_work/asia/philippines/news/news_philippines_supreme_court_launches_pilot_process_management_project_0111/, accessed 15 March 2021

initiative in international dialogue dedicated for judicial reform[153]. Equally laudable is the Global Forum on Liberty and Prosperity under the leadership of Chief Justice Panganiban. The Forum gathered around 300 jurists, academics and law practitioners from across the globe.[154]

Indeed, the early 2000s proved to be a fruitful period for judicial international engagements. Perhaps the same is both a challenge and an opportunity for the contemporary judiciary. It is an opportunity in the sense that antecedents already exist for emulation and evolution. Among the initiatives worth emulating is the "Justice-to-Justice" and "Judge-to-Judge" Dialogues project, which facilitated intellectual exchanges among judges from different parts of the world.[155]

Among the challenges, of course, is subsidy as these international arrangements can be costly. Nevertheless, the COVID-19 pandemic has so far proven the expediency of the different electronic means of communication. Further, international linkages are also just as important. The aforementioned international activities of the Philippine Supreme Court were made possible in collaboration with different international institutions such as the American Bar Association (ABA), the United Nations Development Program, World Bank, Asian Development Bank, The Asia Foundation, and the Australian Agency for International Development.

International judicial cooperation aggressively pursued by other international communities is also worth noting. For instance, jurisdictions within the European Union (EU) exercise numerous forms of judicial cooperation such as mutual recognition of judgments,

---

[153] Panganiban, Artemio. (2005). "A Celebration of Thanksgiving." Delivered at the Ninth Lecture of the Chief Justice Hilario G. Davide, Jr. Distinguished Lecture Series, 'The Commitment toJudicial Education -A Presentation,"on September 29, 2005, San Beda College, Mendiola, Manila.

[154] Panganiban, Artemio. (2019). "Merging law and economics." With Due Respect. Philippine Daily Inquirer. Available at https://opinion.inquirer.net/124992/merging-law-and-economics, accessed 10 March 2021.

[155] Panganiban, Artemio. (2005). "A Transformed Judiciary" Lecture I delivered during the Chief Justice Hilario G. Davide Jr. Lecture Series on October 19, 2005, at the Far Eastern University (FEU) Auditorium.

the transmission of judicial documents between and among EU members, and mutual legal assistance and extradition between and among EU members.[156]

The importance of these international engagements becomes even more glaring in view of the development of different transnational crimes, among which are threats of cybercrimes. Human rights violations through emerging technologies are definitely conceivable in cross-border contexts. Thus the need for a judiciary to be open to international realities.

Moreover, international engagement is also important in nurturing economic prosperity. In *La Bugal-B'laan Tribal Association, Inc. v. Ramos*, Chief Justice Panganiban aptly articulated the economic implications of judicial indifference to international dialogues:

> If this Court closed its doors to those international realities and unilaterally set up its own concept of strict technical and financial assistance, then it might unwittingly make the country a virtual hermit -- an economic isolationist -- in the real world of finance.[157]

B. Challenge for every *Juan*: Technology-mediated Advocacy

While technology may be fairly considered as a source of convenience and efficacy, the public must also be educated as to its corollary threats and potential abuses. There are even some who view bioengineering and artificial intelligence as an "existential threat to

[156] European Commission. (2021). "Types of Judicial Cooperation." Available at https://ec.europa.eu/info/law/cross-border-cases/judicial-cooperation/types-judicial-cooperation_en, accessed 15 March 2021

[157] Separate Opinion, Chief Justice Artemio Panganiban, La Bugal-B'laan Tribal Association, Inc. v. Ramos, G.R. No. 127882, January 27, 2004

human kind on a par with nuclear war and climate change."[158] Intellectual figures such as Yuval Noah Harari and technology titan Elon Musk actually share the same perspective.[159] Whether one shares this extremist view or not, the need for advocacy in human rights and technology is apparent nonetheless.

Advocacy, a form of civic engagement, is often resorted to for lobbying, an act of influencing or persuading political and socio-economic institutions in their decisions.[160] Further, public participation in the discussion on social issues can be made more efficiently today with the use of different social media platforms such as Facebook, Twitter, and Youtube.[161]

Technology-mediated advocacy through social media will also address the commonly perceived indifference of the youth to social issues given that they comprise the majority of the users of social media. In 2020, over 60% of the users of social media in the Philippines are from the ages 18 to 34.[162] This means that social advocacy in relation to issues that concern new-age technology users can easily reach the younger generation if made through social media platforms.

Among the most important functions of social advocacy is to promote awareness, to educate, and to advocate for substantive rights.[163] In light of the deepfake technology abuses and its concomitant legal issues, advocacy as to the relationship of technology and legal rights is unquestionably relevant. While digital technologies such as those offered by artificial intelligence can clearly provide

---

[158] Bethet, Alison. (2019). "Why do emerging AI guidelines emphasize "ethics" over human rights?" Available at https://www.openglobalrights.org/why-do-emerging-ai-guidelines-emphasize-ethics-over-human-rights/, accessed 13 March 2021.

[159] Ibid. Supra, note 13.

[160] Bowen, Glenn, Nickesia Gordon, and Margaret Chojnacki. (2017). "Advocacy Through Social Media: Exploring Student Engagement in Addressing Social Issues". Journal of Higher Education Outreach and Engagement, vol. 21, no. 3, p. 5-31.

[161] Ibid.

[162] Statista. (2020). Social media advertising audience profile 2020, by age and gender

[163] London, Manuel. (2010). "Understanding social advocacy: An integrative model of motivation, strategy, and persistence in support of corporate social responsibility and social entrepreneurship." Journal of Management Development. Vol. 29 No. 3, pp. 224-245.

benefits, social awareness as to their "Trojan horse" nature must also be subject of social awareness campaigns and advocacy.[164]

Advocacy may also be viewed as a proactive way to protecting liberty and nurturing prosperity. With this initiative, the public is involved in the protection of their political rights and in the furtherance of their economic prosperity. This is an empowering thought given that the means and degree of protection and nurturance of the twin beacons of justice is, to a certain extent, in their own hands.

Women, for example, against whom the weaponized deepfakes may be used can lobby for more legislative initiatives for the protection of their rights against technology abuses. Facilitation thereof may be made more efficient in cooperation with different institutions such as advocacy campaigns of the Philippine Commission on Women. In 2017, for example, the Commission spearheaded an online advocacy initiative, #BilangBabae, to seek women's perspectives on varied social issues with the aid of Facebook.

Children are also another vulnerable "digital bodies". "Digital bodies" consist of those "whose images, information, biometrics, and other data stored in digital space."[165] Their tender age made them vulnerable to online abuses. Their inevitable exposure to online media, especially in view of the online classes since the COVID-19 pandemic, makes their digital data more vulnerable to abuses and misapplication. Public awareness as to their rights as embodied in different statutes is important. Further, public international law protect their vulnerability such as in the Rights of Children to Special Protection.

Equally important is the advocacy for cyber-responsibility especially among the youth who are the country's top users of social

[164] Alston, Philip. (2020). "What the "digital welfare state" really means for human rights." Available at https://www.openglobalrights.org/digital-welfare-state-and-what-it-means-for-human-rights/, accessed 15 March 2021.

[165] Sandvik, Kristin. (2019). "Protecting children's digital bodies through rights:. Available at https://www.openglobalrights.org/protecting-childrens-digital-bodies-through-rights/, accessed 16 March 2021.

media applications.[166] These sites present a trove of publicly-shared images and videos of individuals who can, at any given day, be a target of disinformation technology such as in the form of deepfakes. As previously mentioned, deepfakes need not violate data privacy to affect one's data integrity. This is because one's voluntary posts online "can be opened, read, or copied by third parties who may or may not be allowed access to such."[167]

Hence, when an unsuspecting young Filipina, for example, posts digital self-portraits or "selfies" as public posts on Facebook, with quality sufficient to enable AI-enabled learning of her facial maps, a pornographic deepfake video with a hyper realistic imposition of her face thereon may be made. There is therefore a need to educate the public about cyber-responsibility such as the extent of data they may safely share online, especially on social media.

By informing the public of the looming threats and their concomitant legal rights and responsibilities, the people can make informed choices and decisions even before any legal issue arises. In the case of disinformation technology, therefore, and other relevant issues arising from the dearth of pertinent laws that are supposed to protect data integrity of the people online, social advocacy serves as an important and empowering tool. It will not only aid in the resolution but more importantly in the prevention.

[166] Statista. (2020). Social media advertising audience profile 2020, by age and gender
[167] Vivares v. St. Theresa's College, G.R. No. 202666, September 29, 2014

VI. THE INDISPENSABLE: JURISPRUDENTIAL NORMS WITHOUT PRECEDENCE AMID GAPS BETWEEN LAW AND TECHNOLOGY

The impact of technology to the judiciary is indeed paradoxical. On the one hand, technology offers mechanisms to declog court dockets, to streamline court processes for greater efficacy, and to open the courts to public scrutiny thereby upholding transparency for good governance.[168] On the other side of the spectrum are the ramified consequences of technology in the types of controversies that courts adjudicate, as exacerbated by the paucity, obscurity, and silence of the laws appurtenant thereto.

Evidently, new-age technology opens up a Pandora's Box of legal perplexities. As in the case of disinformation technology such as in deepfakes, violation of one's right to data integrity can ramify into several other violation and deprivation of civil and political rights. To illustrate, a successful career woman who decides to leave a dysfunctional relationship could be a victim of a deepfake video in the form of a "revenge porn" by her past lover. Resulting therefrom is her disrepute, public ignominy, and even loss of job or career. The struggle is made worse by the fact that such deepfake video can evade video manipulation detection systems leaving her with no technical means to disprove the video's authenticity. This woman is a microcosm of a society consists of vulnerable "digital bodies" in dire need of protection. However, with the paucity of legislative measures and initiatives in the Philippines to these species of abuses, what remains in the discourse of the Filipino people's liberty and prosperity?

Hence the indispensable role of the judiciary. Notwithstanding the silence or dearth of laws, the judiciary must remain steadfast on its duty to dispense justice. This predicament alone shows the primal

[168] Panganiban, Artemio. (2013). "Automating the judiciary." Philippine Daily Inquirer. Available at https://opinion.inquirer.net/55129/automating-the-judiciary, accessed on 10 March 2021.

power of the judicial branch: judges and justices could protect the people even at times when the legislators cannot.

The aforesaid power of the judiciary is embodied in jurisprudential norms without precedence. While the legislature cannot be omniscient of all future technologies and their concomitant consequences to the people's rights and obligations, the issues arising from the gap between laws and emerging technologies should not leave substantive rights unguarded. To this end, the paper explicates the importance of jurisprudential norms without precedence in law and technology. The liberty-property nexus as a judicial philosophy and the two prongs that reinforce new jurisprudential norms without precedence substantiate the framework: the source-norm dichotomy (academic prong) and judicial globalization (pragmatic prong).

Jurisprudential norms necessitate judicial interpretation. Withal, judicial interpretation ought not to encroach the constitutional sphere of the legislative branch as to amount to judicial legislation. The source-norm dichotomy is relevant in making distinctions between legal sources and legal norms. Interpretation is an intermediary between legal sources and legal norms, hence the significance of the modes of construction and canons of interpretation. Without which, the judiciary supplants or formulates the law, a task for which the people elected the legislators.

As to the pragmatics, judicial globalization establishes the much needed international linkages for exchanges and development of legal comparative knowledge, mutual assessments through best practices. Judicial globalization also promotes cooperation with different countries in data access and distribution, both required in educating members of the bench. Through international engagements, the judiciary fosters informed and temporally suitable jurisprudential norms.

Chief Justice Panganiban's foundational philosophy of liberty and prosperity weaved the aforesaid considerations together. As an underlying philosophy in forming jurisprudential norms without precedence, the liberty-prosperity paradigm enjoins emphasis on social justice in the dispensation of humanized laws and deferential interpretation of economic policies. In upholding the indivisibility of political liberty and economic prosperity in this manner, coupled with the two-pronged approach in jurisprudential norms without precedence, the judiciary is poised to transcend gaps between law and technology in the interest and welfare of every *Juan.*

BIBLIOGRAPHY

I. Primary Sources

A. Philippine Laws

1987 Constitution of the Republic of the Philippines

Civil Code of the Philippines

R.A. No. 4200 or the Anti-Wire Tapping Law in 1965

R.A. No. 8792 or the E-Commerce Act in 2000

R.A. No. 9775 or the Anti-Child Pornography Act in 2009

R.A. No. 9995 or the Anti-Photo and Voyeurism Act in 2009

R.A. No. 10175 or the Cybercrime Prevention Act of 2012

R.A. No. 11449 or the Access Devices Regulation Act of 2019

Revised Penal Code of the Philippines

B. Philippine Jurisprudence

Calalang v. Williams, G.R. No. 47800 December 2, 1940

Cruz v. Secretary of Environment and Natural Resources (Separate Opinion), G.R. No. 135385, December 6, 2000

Del Rosario v Delos Santos, G.R. Nos. L-20589-90, March 21, 1968

Disini v. Secretary of Justice, G.R. No. 203335, February 11, 2014

Drilon v. CA, G.R. No. 107019, 20 March 1997

Esso Standard Eastern, Inc. v. Commissioner of Internal Revenue, G.R. Nos. L-28508-9, July 7, 1989

Gaanan v. IAC, G.R. No. L-69809 October 16, 1986

Kilusang Mayo Uno v. Aquino, G.R. No. 210500, April 2, 2019

La Bugal-B'laan Tribal Association, Inc. v. Ramos, G.R. No. 127882, January 27, 2004

Locsin II v. Mekeni Food Corporation, G.R. No. 192105, December 9, 2013

Magbanua v. Junsay, G.R. No. 132659, 12 February 2007

Marcos v. Manglapus, G.R. No. 88211, September 15, 1989

People v. Pomar, G.R. No. L-22008, November 3, 1924

Philippine Export and Foreign Loan Guarantee Corporation v. V. P. Eusebio Construction, Inc., G.R. No. 140047, July 13, 2004

Philippine Guardians Brotherhood, Inc. v. COMELEC, G.R. No. 190529 (Resolution), April 29, 2010

Poe-Llamanzares v. Commission on Elections, G.R. Nos. 221697 & 221698-700 (Concurring Opinion), March 8, 2016

Privatization and Management Office v. Legaspi Towers 300, Inc., 611 Phil. 16, 28, 2009

Spouses Litonjua v. L.R. Corporation, G.R. No. 130722, March 27, 2000

Tañada v. Angara, G.R. No. 118295 May 2, 1997

Tañada v. Yulo, G.R. No. L-43575, May 31, 1935

Vivares v. St. Theresa's College, G.R. No. 202666, September 29, 2014

C. Treaties and International Conventions

ASEAN Declaration to Prevent and Combat Cybercrime.

Budapest Convention on Cybercrime

Convention on the Rights of the Child

Data Protection Regulation

European Convention on Human Rights

Explanatory Report of the Convention on Cybercrime, available at https://www.oas.org/juridico/english/cyb_pry_explanatory.pdf, accessed 15 March 2021

International Covenant on Civil and Political Rights

Universal Declaration of Human Rights

United Nations Convention on the Rights of a Child

United Nations Human Rights Council Resolution 38/7 (UN GA HRC/RES/38/7)

II. Secondary Sources

A. Textbooks

Agpalo, Ruben. (2009) Statutory Construction, 6th edition. Manila: Rex Bookstore.

Bernas, Joaquin. (2002). An Introduction to Public International Law. Manila: Rex Bookstore.

Charniak, Eugene and McDermott, Drew. (1985) Introduction to Artificial Intelligence. Boston, Mass.: Addison-Wesley.

Dworkin, Ronald. (1993) Life's dominion: an argument about abortion, euthanasia, and individual freedom. New York: Alfred A. Knopf.

Dworkin, Ronald. (1996) Freedom's law : the moral reading of the American Constitution. Cambridge, Mass.: Harvard University Press.

Festin, Gemy Lito. (2016). The Alternative Dispute Resolution and The Arbitration Law. Manila: Rex Bookstore.

Hart, H.L. (1982) Essays on Bentham. Oxford, Clarendon Press.

Ng, Peter, Pepito Po, and Phillip Po. (2007). Legal Research and Bibliography. Manila: Central Books Supply.

North, Douglass. (1990) Institutions, institutional change, and economic performance. Cambridge: Cambridge University Press; 1990.

Panganiban, A. (1999). Leaders by Example, Manila: Supreme Court Printing Press.

Panganiban, Artemio. (2002). Reforming the Judiciary, pp. 374-375. Manila: Supreme Court Press.

Panganiban, Artemio. (2003). The bio-age dawns on the judiciary. Manila: Rex Bookstore.

Panganiban, Artemio. (2006). The Liberty and Prosperity, volume 1. Manila: Supreme Court Printing Press.

Paras, Edgardo. (2008). Civil Code of the Philippines Annotated, 16th edition. Manila: Rex Bookstore.

Regalado, Florenz. (2008). Remedial Law Compendium. Manila: Anvil Publishing.

Rodriguez, Rufus. (2002). Statutory Construction. Manila: Central Professional Books.

Slaughter, Anne-Marie. (2005). A New World Order. New Jersey: Princeton University Press.

Tolentino, Arturo. (2002) Commentaries and Jurisprudence on the Civil Code of the Philippines.

B. Journal Articles and Online References

Abbott, Ryan (2016) "I Think, Therefore I Invent: Creative Computers and the Future of Patent Law." Boston College Law Review, vol. 57, no. 1079. Available at http://lawdigitalcommons.bc.edu/bclr/vol57/iss4/2, accessed on February 15, 2021

Alston, Philip. (2020). "What the "digital welfare state" really means for human rights." Available at

https://www.openglobalrights.org/digital-welfare-state-and-what-it-means-for-human-rights/, accessed 15 March 2021.

Belanche, Daniel, Flavián, Marta, and Pérez-Rueda, Alfredo (2020) "Mobile Apps Use and WOM in the Food Delivery Sector: The Role of Planned Behavior, Perceived Security and Customer Lifestyle Compatibility."*Sustainability*, vol. 12, no. 10.

Benincasa, Eugenio. (2020) "ASEAN needs to enhance cross-border cooperation on cybercrime." Australian Strategic Policy Institute. https://www.aspistrategist.org.au/asean-needs-to-enhance-cross-border-cooperation-on-cybercrime/, accessed 15 March 2021.

Cohen-Tanugi, Laurent. (2016) "Case Law in a Legal System Without Binding Precedent: The French Example." Stanford Law School Traditional Commentary No. 17.

Bethet, Alison. (2019). "Why do emerging AI guidelines emphasize "ethics" over human rights?" Available at https://www.openglobalrights.org/why-do-emerging-ai-guidelines-emphasize-ethics-over-human-rights/, accessed 13 March 2021.

Bowen, Glenn, Nickesia Gordon, and Margaret Chojnacki. (2017). "Advocacy Through Social Media: Exploring Student Engagement in Addressing Social Issues". Journal of Higher Education Outreach and Engagement, vol. 21, no. 3, p. 5-31.

Cote, Catherine. (2021) "What is data integrity and why does it matter?" https://online.hbs.edu/blog/post/what-is-data-integrity?utm_campaign=blog&utm_source=facebook&utm_medium=social, accessed 13 March 2021.

Day, Jack. (1976). "Why Judges Must make Law". Case Western Reserve Law Review, vol. 26, no. 3.

Drechsler, Wolfgang and Kostakis, Vasilis. (2014) "Should Law Keep Pace with Technology? Law as Katechon." Bulletin of Science, Technology, and Society, vol. 34, no. 128.

Easterbroook, Frank. (2017). "The Absence of Method in Statutory Interpretation." The University of Chicago Law Review, vol. 84, no. 81.

Europol (2018). Internet Organised Crime Threat Assessment (IOCTA) of 2018. https://www.europol.europa.eu/internet-organised-crime-threat-assessment-2018

Flaherty, Martin. (2011). "Judicial Globalization in the Service of Self-Government". Ethics and International Affairs, vol. 20 , no. 4 , December 2006, pp. 477 – 503.

Heffron, James Keith. (2014). The Philippine Cybercrime Prevention Act of 2012: To Protect or Destroy? DLSU Business & Economics Review 24.1 (2014), pp. 96-103

Hsu, Jeremy (2009). "Robotic Madness: Creating True Artificial Intelligence." Live Science. March 18, 2009, available at https://www.livescience.com/3407-robot-madness-creating-true-artificial-intelligence.html. Accessed on March 1, 2021.

Humbach, John. (2014). "The Constitution and Revenge Porn". Pace Law Review, vol. 35, issue 215.

Lederer, Frederic. (2014). Judging in the age of technology. American Bar Association. Available at https://www.americanbar.org/groups/judicial/publications/judges_journal/2014/fall/judging_in_the_age_of_technology/

London, Manuel. (2010). "Understanding social advocacy: An integrative model of motivation, strategy, and persistence in

support of corporate social responsibility and social entrepreneurship." Journal of Management Development. Vol. 29 No. 3, pp. 224-245.

Malan, Daniel. (2018). "The law can't keep up with new tech. Here's how to close the gap." World Economic Forum, available at https://www.weforum.org/agenda/2018/06/law-too-slow-for-new-tech-how-keep-up/, accessed on February 15, 2021.

Melencio-Herrera, Ameurfina. (2009). "Perspectives in Judicial Education: Selected Speeches and Writings." Philja Judicial Journal, vol. 1, issue 3.

Murrill, Brandon. (2018). Modes of Constitutional Interpretation. Congressional Research Service. https://fas.org/sgp/crs/misc/R45129.pdf, accessed on March 8, 2021.

Panyatham, Paengsuda. (2020) "Deepfake technology in the entertainment industry: Potential limitations and protections." Carnegie Mellon University, available athttps://amt-lab.org/blog/2020/3/Deepfake-technology-in-the-entertainment-industry-potential-limitations-and-protections, accessed on March 3, 2021

Papp, L. J., Hagerman, C., Gnoleba, M. A., Erchull, M. J., Liss, M., Miles-McLean, H., & Robertson, C. M. (2015). Exploring perceptions of Slut-shaming on Facebook: Evidence for a reverse sexual double standard. Gender Issues, 32(1), 57–76.

Pejčinović Burić, Marija. (2020) Artificial Intelligence and Human Rights. Council of Europe. https://www.coe.int/en/web/artificial-intelligence/secretary-general-marija-pejcinovic-buric

Pinker, Steven. (2004). "Why nature and nurture won't go away." Daedalus, vol. 133, no. 4, pp. 4-17.

Robinson, Keith. (2018) "Emerging Technologies Challenging Current Legal Paradigms." Minnnesota Journal of Law, Science, and Technology, vol. 19, issue 2.

Sample, Ian. (2017). "Google's DeepMind Makes AI Program that Can Learn Like a Human." The Guardian. March 14, 2017.

Sample, Ian. (2020). "What are Deepfakes – and how can you spot them?." The Guardian. January 13, 2020.

Sandefur, Timothy. (2021) "Innovation." The Library of Economics and Liberty, available at https://www.econlib.org/library/Enc/Innovation.html, accessed on March 5, 20201

Sandvik, Kristin. (2019). "Protecting children's digital bodies through rights:. Available at https://www.openglobalrights.org/protecting-childrens-digital-bodies-through-rights/, accessed 16 March 2021.

Shecaira, Fábio. (2014). "Sources of Law Are not Legal Norms," p. 4. The International Journal of Jurisprudence and Philosophy of Law.

Soto, Juana. (2019). "Towards a new model of international judicial cooperation." Available at https://www.elpaccto.eu/en/towards-a-new-model-of-international-judicial-cooperation/, accessed 15 March 2021.

Tolosana, Ruben Vera-Rodriguez , Julian Fierrez , Aythami Morales , Javier Ortega-Garcia. (2020). "Deepfakes and Beyond: A Survey of Face Manipulation and Fake Detection, Information Fusion"

United Nations Office of Drugs and Crime (UNODC). (2021) "Cybercrime in brief." https://www.unodc.org/e4j/en/cybercrime/module-1/key-issues/cybercrime-in-brief.html

Umoh, Ruth. (2017) "Why Elon Musk Might Be Right About His Artificial Intelligence Warnings." CNBC. August 25, 2017. Available at https://www.cnbc.com/2017/08/25/why-elon-musk-might-be-right-about-his-artificial-intelligence-warnings.html, accessed on March 3, 2021

Van Royen K., Poels K., Vandebosch H., Walrave M. (2018) Slut-Shaming 2.0. In: Walrave M., Van Ouytsel J., Ponnet K., Temple J. (eds) Sexting. Palgrave Studies in Cyberpsychology. Palgrave Macmillan.

Verdoliva, Luisa. (2020) "Media Forensics and Deepfakes: An Overview." IEEE Journal of Selected Topics in Signal Processing, vol. 9.

Wang, T., Bhuiyan, M. Z. A., Wang, G., Qi, L., Wu, J., & Hayajneh, T. (2019). Preserving Balance between Privacy and Data Integrity in Edge-Assisted Internet of Things. IEEE Internet of Things Journal, 1–1. doi:10.1109/jiot.2019.2951687

Wentz, Peter. (1998) "Dworkin's Wishful-Thinkers Constitution." 20th World Congress of Philosophy, in Boston, Massachusetts from August 10-15, 1998, available at https://www.bu.edu/wcp/Papers/Law/LawWenz.htm, accessed March 15, 2021

Wiener, Jonathan. (2004) "The regulation of technology, and the technology of regulation." Technology in Society, vol. 26, pp. 483 - 500.

C. Foreign Jurisprudence

Akamai Techs., Inc. v. Limelight Networks, Inc., 797 F.3d 1020 (Fed. Cir. 2015)

Brown v. Allen - 344 U.S. 443, 73 S. Ct. 397 (1953)

Griswold v. Connecticut 381 U.S. 479 (1965)

Immigration and Naturalization Service v. Chadha, 462 U.S. 919 (1983)

M.C. v Bulgaria , (39272/98) [2003] ECHR 646 (4 December 2003)

Missouri v. Holland, 252 U.S. 416 (1920)

Mouvement Raëlien Suisse v. Switzerland, 2012-IV Eur. Ct. H.R. 373

D. Speeches and Lectures

Candelaria, Sedfrey. (2005). "PHILJA Linkages." Delivered at the Ninth Lecture, Chief JustIce Hilario G. Davide, Jr. Distinguished Lecture Series, on "The Commitment to Judicial Education - A Presentation. September 29, 2005, at San Beda College, Mendiola, Manila.

Davide, Hilario. (2005) Judicial Reform in the Philippines: Challenges, Milestones and Lessons Learned. Brown Bag Symposium, World Bank, Washington, D.C., 7 November 2005.

Panganiban, Artemio. (2003). "Judicial Globalization." First Australasia Judicial Educators Forum (AJEF) on February 14, 2003 at the New World Renaissance Hotel, Makati City.

Panganiban, Artemio. (2005). "A Celebration of Thanksgiving." Delivered at the Ninth Lecture of the Chief Justice Hilario G. Davide, Jr. Distinguished Lecture Series, 'The Commitment toJudicial Education -A Presentation,"on September 29, 2005, San Beda College, Mendiola, Manila.

Panganiban, Artemio. (2005) Liberty and Prosperity. April 20, 2005. 10th National Convention of Lawyers sponsored by the Integrated Bar of the Philippines at the CAP-John Hay Convention Center in Baguio City

Panganiban, Artemio. (2005). "A Transformed Judiciary" Lecture delivered during the Chief Justice Hilario G. Davide Jr. Lecture Series on October 19, 2005, at the Far Eastern University (FEU) Auditorium.

Panganiban, Artemio. (2007). Visionary Leadership by Example, 9th National Ayala Young Leaders Congress, the San Miguel Corporation Management Training Center, Alfonso, Cavite, February 7, 2007.

Panganiban, Artemio. (2014a). Safeguard Liberty, Conquer Poverty, Share Prosperity (Part Two – For the Legal Profession), Luncheon Fellowship of the Philippine Bar Association held, at the Tower Club, Makati City, March 26, 2014.

Panganiban, Artemio. (2014b). Safeguard Liberty, Conquer Poverty, Share Prosperity (Part Three — for the the Business Community), 4th Integrity Summit with the Makati Business Club and the European Chamber of Commerce and Industry, at Dusit Thani Hotel, Makati City.

Panganiban, Artemio. (2015). Unleashing Entrepreneurial Ingenuity, 12th General Assembly of the ASEAN Law Association, at the Makati Shangri-la Hotel, Makati City, Feb. 26 to Mar. 3, 2015.

E. Newspaper Columns

Bautista, Andy. (2011). "It's about time: Clogged dockets and judicial delay (Part III)" in My Four Centavos. Philippine Star. July 2, 2011.

Dela Cruz, Abet. (2019) "Was Access Devices Regulation Act reboot really necessary?" The Manila Times.

Landler, Mark. (2000). "A Filipino Linked to 'Love Bug' Talks About His License to Hack". The New York Times. , Available at https://www.nytimes.com/2000/10/21/business/a-filipino-linked-to-love-bug-talks-about-his-license-to-hack.html, accessed 15 March 2021

Panganiban, Artemio. (2012). "How the Judiciary can Help the Economy." With Due Respect. Philippine Daily Inquirer, September 8, 2012

Panganiban, Artemio. (2013). "Legality and technology" in With Due Respect. Philippine Daily Inquirer. February 9, 2013

Panganiban, Artemio. (2013). "Automating the judiciary"in With Due Respect. Philippine Daily Inquirer.

Panganiban, Artemio. (2015). "How Cases are Made". With Due Respect. Philippine Daily Inquirer, July 19, 2015.

Panganiban, Artemio. (2017). "Speeding up quality justice (1)". With Due Respect. Philippine Daily Inquirer, December 24, 2017.

Panganiban, Artemio. (2019). "Merging law and economics." With Due Respect. Philippine Daily Inquirer.

Panganiban, Artemio. (2020). "A Supreme Court worthy of public trust". With Due Respect. Philippine Daily Inquirer, July 12.

F. Miscellaneous

American Bar Association. (2011). "Philippine Supreme Court Launches a Pilot Process Management Project." Available at https://www.americanbar.org/advocacy/rule_of_law/where_we_work/asia/philippines/news/news_philippines_supreme_court_launches_pilot_process_management_project_0111/, accessed 15 March 2021

Bellware, Kim. (2021) "Cheer mom used Deepfake nudes and threats to harass daughter's teammates, police say." The Washington Post, available at https://www.washingtonpost.com/nation/2021/03/13/cheer-mom-Deepfake-teammates, accessed March 16, 2021

Buzz Feed. (2018) "You won't believe what Obama says in this video!" Buzzfeed Youtube channel. Available at https://www.youtube.com/watch?v=cQ54GDm1eL0, accessed on March 5, 2021.

Council of Europe. (2018) Philippines joins the Budapest Convention. https://www.coe.int/en/web/cybercrime/-/philippines-joins-the-budapest-convention

European Commission. (2021). "Types of Judicial Cooperation." Available at https://ec.europa.eu/info/law/cross-border-cases/judicial-cooperation/types-judicial-cooperation_en, accessed 15 March 2021

Eating Things. (2019) "Breaking: Jon Snow apologized for Season 8" Eating Things Youtube channel. Available at https://www.youtube.com/watch?v=4GdWD0yxvqw

INTERPOL. (2020) INTERPOL report highlights key cyberthreats in Southeast Asia. https://www.interpol.int/en/News-and-Events/News/2020/INTERPOL-report-highlights-key-cyberthreats-in-Southeast-Asia

PHILJA. (2021). “History.” Available at https://philja.judiciary.gov.ph/, accessed 15 March 2021

Statista. (2020). Social media advertising audience profile 2020, by age and gender

Tanneeru, Manav. (2009). “Can the Law Keep Up with Technology?” CNN, November 17, 2009, Available at http://www.cnn.com/2009/TECH/11/17/law.technology/index.html, accessed March 3, 2021

White, Geoff. (2020). “Revealed: The man behind the first major computer virus pandemic.” Available at https://www.computerweekly.com/news/252481937/Revealed-The-man-behind-the-first-major-computer-virus-pandemic, accessed 15 March 2021