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COVID-19
BIOETHICAL PROBLEMS WITH ATTENTION
TO THE CONTEXT OF TANZANIA

Foreword by

TESHA KALIST





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I dedicate this thesis to my beloved parents,
to all the Capuchin friars in Tanzania
and to all those who have inspired my life to be who I am.

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FOREWORD

I feel honored and privileged to write the foreword of this book published by *Tipografia Giammarioli* Frascati Rome, on behalf of the *Institutum Superius Theologiae Moralis (Academia Alfonsiana)* of the Pontifical Lateran University.

I am particularly pleased, as former Provincial Minister of the Capuchin Province of Tanzania, to see that Cyril Njau, who got an opportunity for further studies during my term of leadership, was able to complete his studies successfully and produced this book which is the culmination of his doctoral study.

Cyril Njau, the author of this book, has managed to treat a crucial theme of one of the current issues with a title, “COVID-19: Bioethical Problems with attention to the Context of Tanzania” In this book, the author has presented a comprehensive and valuable treatment of Moral Theology from a bioethical perspective.

This remarkable “masterpiece” situates the Moral Theology within a global historical Problem of COVID-19 pandemic in the context of his own Country-Tanzania. Njau shows how COVID-19 pandemic is a credible bioethical problem within the field of Moral Theology.

The object of this dissertation “COVID-19: Bioethical Problems with attention to the Context of Tanzania” has been dealt with by the author through analogical and analytical-comparative method with proper understanding of extensive written sources and a vast amount of other relevant references.

He has critically analyzed COVID-19 problems from theological and bioethical point of view, with a goal to provide a comprehensive and effective ways of addressing this problem or what he called “practical responses” to this COVID pandemic and ensure “future preparedness”.

This research work has a contextual setting and origin that comes from the author's lived experience in Tanzania, - a home country that was hit by COVID-19 and so he witnessed incredible effects caused by COVID-19, including economic crisis, immense spiritual and psychological effects among people. I myself experienced its bitterness, its ugliness and its harshness. After witnessing and experiencing the sufferings caused by COVID, I can see the importance of this research work. It is an effort to participate and contribute in building a better future free from viral infections.

This well-selected topic has a clear theological basis and justification because it is concerned with human life. In the Gospel according to John (Jn 10:10), Jesus said, "*I have come that they may have life, and have it full*" From this statement we learn that Jesus' ministry, which is therefore the ministry of the Church, is about human wellbeing in this life and in the life to come. So, as Christians or followers of Christ, we must work to promote life and at the same time to address all evils which are against the wellbeing of people, or anything which threatens the life of the people including diseases such as this dreadful Covid 19. It is also a call of our Capuchin Constitutions which urges us to ensure *that human life is always defended and promoted* (Const. 149,4).

Writing with great clarity and with excellent scholarship and in view of expressing his concern for human life, the author managed to explore the phenomenon of COVID-19 with its underlying bioethical problems, hence, making a significant impact in the fields of Moral Theology and Bioethics.

The author acknowledges that he has not been exhaustive in this work but he wants to communicate to us what he thinks is currently essential in our struggle to combat COVID-19. Therefore, this work is open for further research and new findings in the future.

I am therefore, very happy to present and recommend to all interested readers, this book of a well-informed Moral Theologian. This book has proved to be the well-deserved research work and a scholarly contribution to the academic and scientific investigations.

Kalist Tesha, OFM Cap
Retired/Former Provincial Minister
Capuchin Province of Tanzania

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As I complete this dissertation, my heart is filled with joy and gratitude for all the blessings that I have received from Almighty God throughout my research studies. Indeed, it was the Providence of God that enabled me to accomplish this great task within the stipulated time. An ungrateful heart does not merit the love of God; I am most grateful. At the completion of this dissertation, I would like to express my sincere thanks to Almighty God for the love, wisdom, care, and strength He rendered me.

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In the name of Fr. Andrzej Kiejza, the rector of my college, “Collegio Internazionale di San Lorenzo da Brindisi dei Frati Cappuccini Roma”, I would like to thank all the members of the college for their friendship and moral support in accomplishing this work. Not forgetting to thank Mrs. Morelli Patrizia, librarian and archivist at the “Biblioteca Centrale dei Cappuccini - Roma”, for her support, advice and willingness to gather material for my research. God bless you all!

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hours reading and offering me very insightful suggestions, good council and generous patience in doing this project.

With a grateful heart, I extend special thanks to Dr. Paula A. Calabrese for her motherly heart who read, reviewed, and edited my dissertation with care and precision. Thanks very much, my lovely sister, for the great work, time, and attention.

With a profound sense of gratitude, I remember the kindness and generosity of all those who have helped me in one way or another in my research. It gives me immense pleasure to express my deep sense of appreciation and thanks to Fr. Thomas Betz OFM^{Cap}, Capuchin Province of St. Augustine in Pittsburgh PA, USA, who connected me to an editor to help me with my work. Mrs Luana Fagioli and her family for their constant presence and support. Special gratitude to Mrs Laura for her motherly love and support. Thanks very much and may the good Lord reward you abundantly.

Finally, my most sincere thanks go to the entire Tanzanian Community in Italy, and to all whose names do not appear on this list and everyone else has helped me during my sojourn in Italy. Each of them has also immensely contributed to the successful completion of this research. I remember and extend my gratitude to all my friends in various parts of Italy that I happened to meet. May the good Lord bestow His abundance of blessings upon all of you, who were instrumental in supporting me as I worked to complete this thesis!

Thanks once again God bless you all.
Br. Cyril Njau OFM^{Cap}
Capuchin Friar - Province of Tanzania 2023

ABBREVIATIONS

ACDC	African Centre for Disease Prevention and Control
ACE-2	Angiotensin-converting enzyme-2
ACHPR	African Charter on Human and People's Rights
AFTCOR	Africa Task force for Coronavirus
AI	Artificial Intelligence
AIE	Artificial Intelligence Enabled
AIFA	Agenzia Italiana del Farmaco
AIIR	Airborne Infection Isolation Room
ANSA	The Agenzia Nazionale Stampa Associata
BARDA	Biomedical Advanced Research and Development Authority
BMA	British Medical Association
CDC	Centres for Disease Control and Prevention
CDF	Congregation for the Doctrine of the Faith
CEPR	Centre for Economic Policy Research
CIA	Central Intelligence Agency
COP	Conference of Parties
COPD	Chronic Obstructive Pulmonary Disease
COVID-19	Coronavirus Disease 2019
CT	Computed Tomography
DNA	Deoxyribonucleic Acid
ECDC	European Centre for Disease Prevention and Control
ECMO	Extracorporeal Membrane Oxygenation
EMA	European Medicines Agency
EUA	Emergency Use Authorization
FDA	Food and Drugs Administration
GDP	The Global gross Domestic Product
HCoV _s	Human Coronaviruses
HCP	Health Care Personnel
HCWs	Healthcare workers

ICTV	The International Committee on the Taxonomy of Viruses
IoMT	Internet of Medical Things
IoT	Internet of things
IPC	Infection Prevention and Control
J&J	Johnson and Johnson COVID-19 vaccine
LMICs	Low- and Middle-Income Countries
LTCFs	Long-Term Care Facilities
MCSP	Maternal and Child Survival Program
MERS	Middle East Respiratory Syndrome
MHRA	Medicines and Healthcare products Regulatory Agency
MoE	Ministry of Education
MoH	Ministry of Health
N.I.C.E	Network of Influenza Care Experts
NAAT	Nucleic acid amplification tests
NAT	Nucleic acid testing
nCoV	Novel Corona Virus
NIAID	The National Institute of Allergy and Infectious Diseases
NIH	National Institutes of Health
PAHO	Pan American Health Organization
PCR	Polymerase Chain Reaction
PELOD	Paediatric Logistic Organ Dysfunction
PHEIC	Public Health Emergency of International Concern
PMC	PubMed Central
PMS	Pontifical Mission Societies
PNAS	Proceedings of the National Academy of Sciences of the United States of America
PoE	Point of Entry
PPE	Personal Protective Equipment
QALY	Quality-Adjusted Life Year
RNA	Ribonucleic Acid
RT-PCR	Real-Time Reverse Transcription Polymerase Chain Reaction
RVS	Respiratory Syncytial Virus
SARS	Severe Acute Respiratory Syndrome
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
SEMICYUC	Sociedad Española De Medicina Intensiva, Crítica Y Unidades Coronarias
SIAARTI	Società Italiana di Anestesia Analgesia Rianimazione e Terapia Intensiva
SOFA	Sequential Organ Failure Assessment
SOP	Standard Operating Procedures
TBS	Tanzania Bureau of Standards

TCRA	Tanzania Communications Regulatory Authority
TMMDA	Tanzania Medicines and Medical Devices Authority
TTI	Test, Trace and Isolation
UAB	The University of Alabama at Birmingham
UDHR	Universal Declaration of Human Rights
UNHCR	Nations High Commissioner for Refugees
UNWTO	The United Nations World Tourism Organization
UV	Ultraviolet
VOC	Variant of Concern
VOHC	Variant of High Consequence
VOI	Variant of Interest
WHO	World Health Organization

GENERAL INTRODUCTION

In late December 2019, patients presenting with viral pneumonia due to an unidentified microbial agent were reported in the Huanan South China seafood “wet” Market. A novel coronavirus was subsequently identified as the causative pathogen, provisionally named 2019 novel coronavirus (2019-nCoV). To differentiate it from other SARS, on 11th February 2020, the International Committee on Taxonomy of Viruses approved the official name “Severe Acute Respiratory Syndrome Coronavirus 2” (SARS-CoV-2). Coronaviruses are a large family of encased RNA viruses, some of which cause illness in people (e.g., common cold, Severe Acute Respiratory Syndrome [SARS], Middle East Respiratory Syndrome [MERS]), and others that circulate among mammals and birds⁽¹⁾. Transmission of SARS-CoV-2 occurs primarily when an infected person is in close contact with another person, through the respiratory tract, aerosols and fomites.

1.1. Statement of the Problem

The coronavirus disease (COVID-19) is a transmittable and pathogenic viral infection caused by SARS-CoV-2. COVID-19 virus is severely hitting the whole world. No one is spared from this virus. It started in Wuhan China but now has spread throughout the world. It was named Chinese flu or virus at the beginning. However, due to its virulent spread on 11th

(1) Q. LI, X. GUAN, P. WU et al., «Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia», in *New England Journal of Medicine* 382/13 (2020) 1199-1207.

March 2020 World Health Organization (WHO) declared that, the novel coronavirus, COVID-19 was a pandemic. In less than one year, the virus has spread throughout the world. It is the disease of everyone, rich, poor, black, white, race, religion, and first or third world countries. In short time, coronavirus transformed from being an intercontinentally transmitted disease to being a community-transmitted disease. The virus is in our communities and families now. The disease has changed our relationship with others. It has affected all aspects of societal infrastructure such as health, spiritual, social, economy, education, transportation, family, and personal lives.

The COVID-19 pandemic has shaken society and health systems. The pandemic has crossed provincial, conceptual, intellectual, social and educational boundaries. Scientists and researchers around the world are working diligently to overcome the challenges posed by COVID-19. The number of infected patients is increasing faster than hospitals can afford to procure additional beds, ventilators, monitors and personal protective equipment (PPE), and to employ competent healthcare workers. Many health workers have contracted the virus while caring for coronavirus patients, putting global health at risk and causing more stress for other staff⁽²⁾. COVID-19 is a crisis that requires an international response. Governments must ensure that reliable information is available to assist the public in combating this epidemic. Community health and infection control measures are urgently needed to reduce the damage caused by COVID-19 and minimize the overall spread of the virus. Therefore, this thesis documents, defines and analyzes the bioethical problems associated with the global spread of the coronavirus with a particular emphasis on Tanzania, East Africa.

The first phase of COVID-19 was mild in Tanzania compared to other countries. Nevertheless, 509 cases and 21 deaths occurred in the first five months of the epidemic. Everyone was scared by the scope of its transmission. The government through the Ministry of Health collaborated to ask people to adhere to the CDC and WHO regulations for preventing further spread of COVID-19. The response was very positive since everyone and everywhere people started using the facemasks, washing hands frequently, using sanitizers, avoiding crowding, maintaining social distance, isolation for the suspects, closing the schools, spiritual activities and re-

(2) S. K. UDGATA, *Internet of Things and sensor network for COVID-19*, Springer Nature, Singapore 2021, 1.