Higher Education in the World 7

Humanities and Higher Education: Synergies between Science, Technology and Humanities

Higher Education in the World 7

Humanities and Higher Education: Synergies between Science, Technology and Humanities

Table of Contents

Publication Team

Editorial Team

David Bueno
Josep Casanovas
Marina Garcés
Josep M. Vilalta

International Advisory Board

Rosi Braidotti
Gemma Derrick
Arne Jarrick
Alireza Omidbakhsh

Authors

Dzulkifli Abd Razak
Paula Adam
Manale Adnane
Anna Aguilar-Amat
Amal Al Malki
Zakia Ali-Chand
Freddy Álvarez
Maria Elena Álvarez-Buylla
Francesca Antongiovanni
Marco Armiero
Paul Ayris
Kaustuv K. Bandyopadhyay
Josep E. Baños
Martín Barajas
Martín E. Barajas
Jorge G. Bautista
Ahmed Bawa
Paul Benneworth
Quim Bonastra
Lihanna Borhan
Rosi Braidotti
Jordi Bruno
Carmen Caamaño
Irene Cambra-Badii
Celia Caregnato
Antonio Casado
Stefano Chessa
Pilar Cid-Leal
Mariantonietta Cocco
Marta Congiu
Bartolo Cruz
Maria Laura Cuffí

Monica Degen
Haruaki Deguchi
Damián del Valle
Raúl Delgado
Romina Deriu
Gemma Derrick
Axel Didriksson
Zeinab El Maadawi
Dobrivoje Lale Eric
F. Xavier Escribano
Chika Ezeanya-Esiobu
Linden Farrer
Carme Fenoll
Ana María Fernández
Andrea Fernández
Gabriel Fernández-Borsot
Teresa Fèrriz
Àngel Font
Anna Forés
Paulo Franchetti
Marta Fuentes
Philippe Galiay
Mª Ángeles García
Valentina Ghibellini
Rosa M. Gil
Fernando Giráldez
Damià Gomis
Marta Gràcia
Elena Guardiola
Daniel Gutiérrez-Ujaque
Sara Guyer
Budd Hall
John Hartley
Alicia Hernández
Daniel Innerarity
Arne Jarrick
Agnieszka Jelewska
Jordi Jiménez
Martí Jiménez
Gloria Jové
Jooyoung Kim
Marcelo Knobel
Nandita Koshal
Michal Krawczak
Ignasi Labastida
Carles Lalueza-Fox
Aurora Lechuga

Marta Llop
Francisco López
D.B. Lortan
S.M. Maistry
Fatima Marinho
Meritxell Martell
Josep Lluís Martí
Federico Mayor Zaragoza
Alberto Merler
Analía Minteguiaga
Lucy Montgomery
Roberto Moreno
Cameron Neylon
Sijbolt Noorda
Akpezi Ogbuigwe
Julia Olmos-Peñuela
Hèléne Périvier
Daniela Perrotta
Michael A. Peters
Gilberto Pinzón
Claudia Prats
Maria José Prieto
René Ramírez
Emanuela Reale
Guillem Roca
Alexis Roig
Iza Romanowska
Núria Ruiz
Ana Sánchez-Bello
Zainal Abidin Sanusi
Xavier Serra
Farrah Sheikh
Andrew Simpson
Zacharoula Smyrnaiou
Piotr Stankiewicz
Lee Sternberger
Rajesh Tandon
Susanna Tesconi
Sandra Torlucci
Carme Torras
Olga Torres-Hostench
Crystal Tremblay
Judith Urbano
Andrea Vargiu
F. Xavier Vila
Jaume-Elies Vilaseca
Richard Watermeyer

Peter J. Wells
Sarah Marie Wiebe
Katie Wilson
Madhura Yadav
Anastasia Zabaniotou

GUNi President

Joan Elias

GUNi Secretariat

Josep M. Vilalta
Director

Alícia Betts
Head of Projects

Victoria Gómez
Project Officer

Marta Cayetano
Communication Officer

Supporting Institutions

UNESCO
Catalan Association of Public Universities (ACUP)

List of Figures and Tables

Figures

Tables

List of Abbreviations

3Os	Open Science, Open Innovation, Open to the World
AAAS	American Association for the Advancement of Science
ACM	Association for Computing Machinery
ACU	Association of Commonwealth Universities
ACUP	Association of Catalan Public Universities
ADN	Asia Democracy Network
ADRN	Asia Democracy Research Networks
AECHE	Arab-Euro Conference on Higher Education
AERC	African Economic Research Consortium
AI	Artificial Intelligence
AMC	Mexican Academy of Sciences
AMH	Academy of Mobility Humanities
AMHN	Asia Mobility Humanities Network
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
APU	Ritsumeikan Asia Pacific University
AQuAS	Agency for Health Quality and Assessment of Catalonia
ASD	Autism Spectrum Disorder
AWMF	Andrew W. Mellon Foundation
BG	Business Games
BISS	Barcelona International Summer School
BMAS	German Federal Ministry of Labour and Social Affairs
BOAI	Budapest Open Access Initiative
C3	Center for Complexity Sciences
CAHS	Canadian Academy of Health Sciences
CBOs	Community Based Organisations
CBPR	Community Based Participatory Research
CE	Community Engagement
Cedefop	European Center for the Development of Vocational Training
CEIPAC	Center for the Study of Provincial Interdependence in Ancient Classics
CERN	European Organization for Nuclear Research
CfH	Center for the Humanities
CGE	Center for Global Engagement
CHCI	Consortium of Humanities Centers and Institutes
CHE	Center for Culture, History and the Environment
CHR	Centre for Humanities Research
CLACSO	Latin American Council of Social Sciences
CNPEM	Brazilian Center for Research in Energy and Materials
CNRI	National Research Council of Italy
CNRS	National Scientific Research Council (France)
COB	Oceanographic Centre of the Balearic Islands
COMbINE	Complementary Methods in Evaluation Research
CONACYT	National Council of Science and Technology of Mexico
CONICET	National Council of Scientific and Technical Research of Argentina
CoPs	Communities of Practice
CPN	Center for the Promotion of Science
CRAI	Resource Center for Learning and Research
CRES	Regional Conference on Higher Education in Latin America and the Caribbean
CRUE	Spanish Conference of Rectors
CSIC	Superior Council of Scientific Research of Spain
CSO	Civil Society Organization
CVD	Cardiovascular Disease
DHET	Department of Higher Education and Training
DIY	Do It Yourself
DoE	Department of Education
DOI	Digital Object Identifier
DORA	Declaration on Research Assessment
DUT	Durban University of Technology
EASSH	European Alliance for Social Science and Humanities
EC	European Commission
ECLAC/CEPAL	Economic Commission for Latin America and the Caribbean
ECRC	Engaged Citizens, Responsive City
ECRs	Early Career Researchers
ECSA	European Citizen Science Association
ECTS	European Credit Transfer and Accumulation System
EE	Environmental Education
EGERA	Effective Gender Equality in Research and the Academia
EH	Environmental Humanities
EHEA	European Higher Education Area
EHL	Environmental Humanities Laboratory
EIA	Engagement and Impact Assessment
EMI	English-Medium Instruction
ENRESSH	Evaluative Research in the Social Sciences and Humanities
ENST-Bretagne	National School of Telecommunications of Brittany

EOCGE	Employer of Choice for Gender Equality
EOSC	The European Open Science Cloud
EPNet	Economic and Political Network
ERA	European Research Area
ERA	Excellence in Research Australia
ERC	European Research Council
ERP	Enterprise Resource Planning
ESA	European Space Agency
ESD	Education for Sustainable Development
ESFRI	European Strategy Forum on Research Infrastructures
ESO	European Southern Observatory
ESTEAM	Ethics, Science, Technology, Arts, Engineering and Mathematics
EU	European Union
EUA	European University Association
EUFP	European Union Framework Programme
Euratom	European Atomic Energy Community
FAIR	Findable, Accessible, Interoperable, Re-Usable
FLACSO	Latin American Faculty of Social Sciences
FNU	Fiji National University
FPIC	Free, Prior and Informed Consent
FPs	Framework Programmes
FTA	Free Trade Agreements
FTAA	Free Trade Area of the Americas
GAFA	Google, Apple, Facebook and Amazon
GAMe	Young Mediterranean Ambassadors Group
GCEP	Global Competency Enhancement Programme
GEP	Gender Equality Policy
GHG	Greenhouse Gases
GIS	Geographic Information Systems
GM Foods	Genetically Modified
GS	Global Situation
GUNi	Global University Network for Innovation
GWd	Gigawatt-days
HAT	Humanities, Arts, Technology
HEIs	Higher Education Institutions
HEIW	Higher Education in the World Report
HESP	Hispanic and European Studies Program
HfE	Humanities for the Environment Observatories
HLW	High-Level Waste
HPV	Human Papillomavirus Infection
HR	Human Resources
IAEA	International Atomic Energy Agency
IAEN	National Institute of Higher Studies
IAS	Institute for Advanced Study
IAU	International Association of Universities

IBEI	Barcelona Institute of International Studies
IBSE	Inquiry-Based Science Education
IC	Institutional Change
ICAEN	Catalan Institute for Energy
ICO	Oncology Institute of Catalonia
ICOM	International Council of Museum
ICRA	International Conference on Robotics and Automation
ICT	Information and Communication Technology
IDRC	International Development Research Center
IEEE	Institute of Electrical and Electronic Engineers
IEO	Spanish Institute of Oceanography
IESALC	International Higher Education Institute for Latin America and the Caribbean
IIHEd	The International Institute for Higher Education Research and Capacity building
IISUE	Research Institute on University and Education
IIUM	International Islamic University Malaysia
ILO	International Labour Organization
IMEDEA	Mediterranean Institute for Advanced Studies
IoT	Internet of Things
IRH	Institute for Research in the Humanities
IRI	Institute of Industrial Informatics and Robotics
IROS	International Conference on Intelligent Robots and Systems
ISA	Higher Institute of Arts of Cuba
ISRIA	International School on Research Impact Assessment
ISS	Institute of Social Studies
ITP	Interactive Telecommunications Program
ITU	International Telecommunication Union
JGU	O.P. Jindal Global University
JIBS	Jindal Institute of Behavourial Sciences
JIRICO	Jindal Initiative on Research in IP and Competition
JMU	James Madison University
JRC	Joint Research Centre
JSiE	Jindal Centre for Social Innovation and Entrepreneurship
K4C	Knowledge for Change
KPI	Key Performance Indicator
KTH	Royal Institute of Technology
LBGTQ	Lesbian, Bisexual, Gay, Transgender, Queer
LBGTQIA	Lesbian, Bisexal, Gay, Transgender, Queer, Intersex, Asexuality
LERU	League of European Research Universities

LIBER	Association of European Research Libraries		PUCE	Pontifical Catholic University of Ecuador
LINCC	Laboratory on Climate Change		R&D	Research and Development
LNNano	Brazilian Nanotechnology National Laboratory		R&I	Research and Innovation
LWR	Light-Water Reactor		RCC	Rachel Carson Center for Society and the Environment
MCU	Magna Charta Universitatum			
MECD	Ministry of Education, Culture and Sports		RCUK	Research Councils United Kingdom
MED-HUB	Knowledge Hub on the Euro-Mediterranean region		REF	Research Excellence Framework
			RIA	Research Impact Assessment
MENA	Middle East and North Africa		RMEI	Network of Mediterranean Engineering Schools
MESA	Mainstreaming Environment and Sustainability in African Universities			
			RRI	Responsible Research and Innovation
MHE	Mobility Humanities Education Center		RTDI	Research, Technology Development and Innovation
MIT	Massachusetts Institute of Technology			
MNAC	National Museum of Art of Catalonia		SAHECEF	South African Higher Education Community Engagement Forum
MOOC	Massive Online Open Course			
MSCA	Marie Skłodowska-Curie Actions		SAQA	South African Qualifications Authority
MSD	Musculoskeletal Disorder		SBM-U	Swachh Bharat Mission – Urban
MSESD	Mediterranean Strategy on Education for Sustainable Development		SDGCA	Sustainable Development Goal Center for Africa
MTG	Music Technology Group		SDGs	Sustainable Development Goals
NEET	Not in Education, Employment or Training		SEA	Andorra's Educational System
NGO	Non-Governmental Organization		SEBD	Spanish Society of Developmental Biology
NKUA	National Kapodistrian University of Athens		SEKCI	Organic Code on the Social Economy of Knowledge, Creativity and Innovation
NPO	Non-Profit Organisation			
NSB	National Science Board		SEP	Standard Evaluation Protocol
NSF	National Science Foundation		SET	Students' Evaluations of Teachers
NUI	National University of Ireland		SF	Science Fiction
NWO	Netherlands Organisation for Scientific Research		SHTEAM	Science, Humanities, Technology, Engineering, Arts and Medicine
OECD	Organisation for Economic Cooperation and Development		SICs	Settlement Improvement Committees
			Sida	Swedish International Development Agency
OFCE	French Economic Observatory		SiS	Science in Society
OIP	Office of International Programs		SKB	Swedish Nuclear Waste Management
ORCID	Open Researcher and Contributor ID		SMAC	Social, Mobile, Analytics and Cloud
OSPP	Open Science Policy Platform		SMEs	Small and Medium Sized Enterprises
PAR	Participatory Action Research		SNF	Spent Nuclear Fuel
PCT	Patent Cooperation Treaty		SOAS	School of Oriental and African Studies
PERMSEA	Strategic Plan for the Overhaul and Improvement of Andorra's Education System		SRIA	Strategic Research and Innovation Agenda
			SSH	Social Sciences and Humanities
PISA	Participant Platform for Innovation, Social Inclusion and Active citizenship		STEAM	Science, Technology, Arts, Engineering and Mathematics
PRESAGE	Research and Teaching Program of Knowledge on Gender		STEM	Science, Technology, Engineering and Mathematics
PRIA	Participatory Research in Asia		STS	Science-Technology Studies
PRIMA	Partnership for Research and Innovation in the Mediterranean Area		SUNY	State University of New York
			SwafS	Science with and for Society
PRIU	Regional Platform for University Integration		TARGET	Taking a Reflexive Approach to Gender Equality for Institutional Transformation in Mare Nostrum
PSE	Participatory Settlement Enumeration			
PSET	Post School Education and Training			
PUA	Participatory Urban Appraisal		TCNJ	The College of New Jersey

TDR	Teacher Design Research
TEACHENER	Integrating Social Sciences and Humanities into Teaching about Energy
TeRRIFICA	Territorial Responsible Research and Innovation Fostering Innovative Climate Action
TFP	Total Factor productivity
THE	Times Higher Education
tHM	Tonne of Heavy Metal
TMX	Translation Memory eXchange
TVET	Technical Vocational Education and Training
UAB	Autonomous University of Barcelona
UAM	Autonomous University of Madrid
UAZ	Autonomous University of Zacatecas
UB	University of Barcelona
UBA	University of Buenos Aires
UCL	University College of London
UCLA	University of California, Los Angeles
UdeG	Universidad de Guadalajara
UdG	University of Girona
UdL	University of Lleida
UEA	University of East Anglia
UEMF	EuroMediterranean University Fes
UfM	Union for the Mediterranean
UFZ	Helmholtz Centre for Environmental Research
UIB	University of the Balearic Islands
UIC	International University of Catalonia
UID	Unique Identification Document
UMAC	University Museums and Collections
UN	United Nations
UNA	National Arts University
UNAE	National University of Education of Ecuador
UNAM	National Autonomous University of Mexico
UNAN	National Autonomous University of Nicaragua
UNASUR	Union of South American Nations
UNDESD	United Nations Decade of Education for Sustainable Development
UNDP	United Nations Development Program
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNE	United Nations Environment
UNEARTE	National University of Experimentation of the Arts
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
Unicamp	University of Campinas
UNICEF	United Nations Children's Fund
UNIMED	Mediterranean Universities Union

UniRitter	Ritter dos Reis University Center
UNLP	National University of La Plata
UNRISD	United Nations Research Institute for Social Development
UNU-EHS	United Nations University Institute for Environment & Human Security
UNU-WIDER	United Nations University World Institute for Development Economics Research
UOC	Open University of Catalonia
UoN	University of Nairobi
UoTs	Colleges and Universities of Technology
UPC	Polytechnic University of Catalonia-BarcelonaTech
UPF	Pompeu Fabra University
UPV	University of the Basque Country
URV	Rovira i Virgili University
USIM	Board of Directors for Islamic Science University Malaysia
USM	University Sains Malaysia
USP	University of the South Pacific
UVic	Vic University
UWC	University of the Western Cape
VESS	Meaningful Life with Balance and Wisdom
VET	Vocational Education and Training
WEF	World Economic Forum
WHO	World Health Organisation
WIPO	World Intellectual Property Organization
WP	Work Programmes
WTO	World Trade Organization
WW2	World War Two

About the Authors

Dzulkifli Abd Razak is the Rector of the International Islamic University Malaysia. He is the former president of the International Association of Universities (IAU), a UNESCO-based organization located in Paris. He was also the Chair of the Board of Directors for Islamic Science University Malaysia (USIM), and held the chair of Islamic Leadership at USIM from 2014-16. He is an honorary professor at the University of Nottingham. He also chairs the steering council of the Right Livelihood College Global Secretariat based at the University of Bonn, Germany, and the Malaysian Productivity Centre Panel for Productivity Culture. He was the 5th vice-chancellor of Universiti Sains Malaysia (USM) from 2000 to 2011. He was awarded an Emeritus Professorship by the USM in honour of his immense scholarship and contributions to the university.

Paula Adam is the Head of Research at the Agency for Health Quality and Assessment of Catalonia (AQuAS), co-founder and co-chair of the International School on Research Impact Assessment (ISRIA) and leader of the ISOR Group (Social Impact of Research). Dr Paula Adam (PhD) is an expert on the social impact of sciences and the assessment of research impact on society, with special emphasis and orientation on transformational changes and optimisation of sciences in view of a better orientation towards global social challenges. Most of her work is in the health sciences, but she has also experience in other scientific areas. Paula also coordinates a commission on the accreditation and assessment of Spanish health research institutes associated to the Carlos III Health Institute. Paula holds a PhD in Economics from the European University Institute in Florence, Italy.

Manale Adanane was born in Meknes and is currently living in Fes in order to pursue her studies at the Euro-Mediterranean University of Fes. In 2017 she received a scientific bachelor's degree in physics with the highest honours. Aiming to become an architect, she successfully passed the entrance exam to get into the UEMF School of Architecture, Design and Urbanism: EMADU; which she joined in September 2017 on a scholarship that was renewed after being one the top students in her class. Currently a second year architecture student, she is also very active in several clubs, including the music club, the debating club and others.

Anna Aguilar-Amat holds a BA in Literature and PhD in Linguistics, is a tenured lecturer in Terminology at the Department of Translation, Interpreting and East Asian Studies at the Universitat Autònoma de Barcelona. She teaches on undergraduate and graduate courses on Terminology and Specialized Translation. Being a member of the Tradumàtica Research Group she has contributed to several funded research projects on Knowledge Bases and Machine Translation, focusing on Semantics of Terminology and lexical choice. She is also interested in less translated languages and lateral thinking. She has contributed to several funded research projects such as EUROTRA, MULTEXT, ATLAS-Fujitsu, TRACE (Assisted Translation, Quality and Evaluation); ProjecTA and ProjecTA-U projects on Machine Translation and Users of Machine Translation. She has published her research in impact journals and books. She collaborates with Universitat Pompeu Fabra on the NEÓMETRO project to measure new words and concepts in the Spanish language.

Amal Al Malki is the Founding Dean of the College of Humanities and Social Sciences at Hamad bin Khalifa University, Qatar Foundation. Prior to that, she was the Executive Director of the Translation and Interpreting Institute, which she founded in 2011. She was also an Associate Professor at Carnegie Mellon University in Qatar where she taught courses in writing composition, postcolonial literature, theories of translation and Islamic feminism. Dr. Al-Malki holds a PhD in Comparative Literature from the University of London-SOAS, where she also earned a Master Degree in English-Arabic Applied Linguistics and Translation. Dr. Al-Malki's research interests include the negotiation of identity between East and West, media representations of Arab women and postcolonial literature. She has published numerous articles in academic journals in the United States and the UK. Her book, *Arab Women in Arab News: Old Stereotypes and New Media* (2012) is published by Bloomsbury Qatar Foundation and Bloomsbury Academic, UK. It was lauded as the first comprehensive study of the topic in the world. She also edited *The Writer's Craft: Teaching Creative Writing in Qatar*, published as part of an initiative honoring Doha as the Arab Capital of Culture in 2010.

Zakia Ali-Chand is an Associate Dean of Research at the College of Humanities and Education, Fiji National University. Dr Ali-Chand has a PhD in Linguistics from the University of the South Pacific and a Master in Applied

Linguistics from the University of New England. Her research interests include strategies for second language learners, error analysis, diasporic writing and gender and women's leadership.

Freddy Álvarez is Rector of the National University of Education (UNAE). He has held important management positions in the field of education, such as Deputy Rector of the National Institute of Higher Studies (IAEN), Deputy Dean of Research at the IAEN and Director of Academic Excellence at the Indoamerican Technological University. As a university professor, Freddy has taught at the Pontifical Catholic University of Ecuador (PUCE), University of Murcia (Spain), Cambridge University (United Kingdom), Latin American Faculty of Social Sciences (FLACSO), National Institute of War, University of Paris 8, Central University of Ecuador and the National Polytechnic University, among other higher education institutions. Freddy served as member of the "Epistemology of Politics" research group at the Salesian University. He was also the Director of the Master's Program in Philosophy and the Coordinator of the Cognitive Development Course at the Catholic University. He holds a master in educational sciences from the University of Lyon II and a PhD in Philosophy from the University of Paris 8.

María Elena Álvarez-Buylla has been the director of the National Council of Science and Technology (CONACYT) in Mexico since 2018. Álvarez-Buylla is a scientist who specializes in evolutional ecology within the framework of Development Biology, from the perspective of the Biology of Systems. She is a full-time "C" researcher in the Department of Functional Ecology at the National Autonomous University of Mexico (UNAM), where she founded the Plant Molecular Genetics, Epigenetics, Development and Evolution Laboratory. She is the co-founder and research coordinator of the Complexity Sciences Center at the National Autonomous University of Mexico. In 2017, she received the National Science and Arts Award in the category of physical-mathematical and natural sciences. Dr. María Elena Álvarez-Buylla is one of the most prominent scientific leaders in Mexico in the promotion of science that is committed to equality, justice and social welfare. Since 2008, she has been the founder and general coordinator of the Union of Society-Committed Scientists.

Francesca Antongiovanni is a social worker and works as a junior researcher at the FOIST Laboratory of the University of Sassari and at IntHum – Intercultural Laboratory for Research and Promotion of Human Condition. Within the K4C Programme, she is a mentor accredited in Community Based Research by the UNESCO Chair in Community Based Research and Social Responsibility in Higher Education. Her main research interests concern Community Based Research, social policies, migration and gender issues.

Marco Armiero is the Director of the Environmental Humanities Laboratory (EHL) at the KTH Royal Institute of Technology in Stockholm, Sweden, where he is also an Associate Professor of Environmental History. He has published two monographs, one handbook, five edited volumes, and numerous articles and book chapters. His research interests span from environmental justice to climate change, from migration to the nationalization of nature. In five years he has made the EHL in Stockholm one of the key global players in the Environmental Humanities field. Marco Armiero is a senior editor of Capitalism Nature Socialism (T&F) and associate editor of Environmental Humanities (Duke UP). He also serves on several boards of journals, centers, and professional associations.

Paul Ayris is Pro-Vice-Provost (UCL Library Services), Chief Executive of UCL Press and the chair of LIBER's Citizen Science Working Group. Paul has also served as President of LIBER (2010-2014) and advised the LIBER Board on EU matters. He is Co-Chair of the LERU (League of European Research Universities) INFO Community. He chairs the OAI Organizing Committee for the Cern-Unige Workshops on Innovations in Scholarly Communication. He is also Chair of the JISC Collections' Content Strategy Group. He has a Ph.D. in Ecclesiastical History and publishes on English Reformation Studies.

Kaustuv K. Bandyopadhyay is the Director of Participatory Research in Asia (PRIA). He has 25 years of professional experience with academic institutions and CSOs. He has worked on citizen participation, social accountability, and democratic governance in urban and rural contexts. He is a well-known participatory researcher and facilitator of organisational development, monitoring and evaluation, and participatory training methodologies. He currently serves on the Steering Committee of Asia Democracy Research Networks (ADRN) and

the Asia Democracy Network (ADN). He has published several articles, manuals, books, and monographs, which contributed to knowledge-building on participatory urban governance and civil society building in Asia. He holds a Ph.D. degree in Anthropology for his work with the Parhaiya tribes of Chota Nagpur in India.

Josep E. Baños holds a Bachelor in Medicine (1981) and PhD in Pharmacology (1988) from the Universitat Autònoma de Barcelona. Rector and full professor of clinical pharmacology at the Universitat de Vic – Universitat Central de Catalunya (2019). Full Professor at the Department of Experimental and Health Sciences at Universitat Pompeu Fabra (UPF, 2011-2019), director of the Master's on Pharmaceutical and Biotech Companies (2006-2019), and director of the Group on Educative Research on Health Sciences (2017-2019). Visiting researcher at CNRS (Gif-sur-Yvette) and Allegheny University of Health Sciences (now Drexel University in Philadelphia). Visiting professor at McMaster University, Universidad de Chile and Università di Firenze. He is the chair of the Margalida Comas program for the improvement of teaching in Catalan universities of the Generalitat de Catalunya. His interests are focused on the use of active methods and the contribution of medical humanities to the training of medical students. He has (co-)authored over 700 publications, almost a hundred devoted to educational issues.

Martín Barajas was born in the city of Guadalajara, Jalisco (Mexico), which is where he attended school. After graduating in 1980 with a Bachelor's Degree in Dental Surgery, in 1981 he became a full-time professor of clinical practice, an activity that he still performs today. In 2004, he obtained a Master's Degree in Education with Intervention in Educational Practice and in 2012 completed 100% of the credits for a PhD in Education Sciences. For the last 16 years, he has been working as an advisor on Planning and Coordination to the University Centre of Health Sciences (CUCS) at the University of Guadalajara, as well as serving as a full-time professor at that university, where he has been recognised for his Desirable Profile by the Program for the Professional Development of Teaching. He has participated in several high-impact tasks, of particular note being the 22 years served as a member of the Advisory Board to the Degree in Dental Surgery taught at the CUCS. He was involved in the draft of the 2014-2030 CUCS Institutional Development Plan, as well as being the author or co-author of several scientific publications.

Martín Enrique Barajas is a native of the city of Guadalajara, Jalisco (Mexico), where he received all of his school and academic training. In 2010 he became an undergraduate student of Dental Surgery and received the corresponding degree in April 2015. His many academic activities have included co-authorship of two editions of the book "Fundamentos en Endodoncia", which forms part of the basic bibliography for the Propaedeutics course in the Endodontics speciality at the University of Guadalajara. He has also provided support in various academic roles to the management of the Department of Dentistry for the Preservation of Health at the University Centre of Health Sciences (CUCS) at the University of Guadalajara. In April of the current year he joined the academic staff in the Department of Comprehensive Dental Clinics at the CUCS, working as an 'A' Associate Academic Technician (Full Time) to offer clinical guidance to students on the Dental Surgery degree when performing dental treatments in the field of Periodontics.

Jorge G. Bautista was born in the city of El Grullo, Jalisco (Mexico), on 24 August 1954, and later moved to Guadalajara, Jalisco, where he received his elementary, secondary and higher education. In the latter, he became a certified Surgeon and Midwife at the University of Guadalajara in 1981, gained Specialisation in General Surgery at the University of Guadalajara in 1988 and, finally, received an MA in Health Services Management from the University of Guadalajara in 2012. His profesional experience has included becoming a Full-Time Professor at the University of Guadalajara in 1983; and joining the Fray Antonio Alcalde Civil Hospital in Guadalajara in 1998 as Assistant Medical Manager, which is a position he continues to hold today. In academic activities, he is classed as having a PRODEP Desirable Profile, is a member of the Group of Rectory Experts at the University Centre of Health Sciences (CUCS), is Secretary of the Academy of Surgical Medical Pathology, and has also co-authored various publications and book chapters.

Ahmed Bawa is a theoretical physicist and leads Universities South Africa. Until 30 April 2016 he was Vice-Chancellor and Principal of Durban University of Technology and before that spent several years as a faculty member of the Department of Physics and Astronomy at Hunter College and as a member of the doctoral faculty at the Graduate Center, City University of New York. He served as the Program Officer for Higher Education in Africa with the Ford Foundation and during this time led and coordinated the Foundation's African Higher

Education Initiative. Ahmed Bawa holds a Ph.D. in Theoretical Physics from the University of Durham in the UK. He served on a number of policy development teams in the post-1994 period in the areas of Science and Technology and Higher Education. He is a Fellow of the Royal Society of South Africa as well as the Academy of Science of South Africa of which he was one of the inaugural vice-presidents and is a current Council member. He also served as Chair of the Board of the Foundation for Research Development, and was Vice-Chair of the board of the Atomic Energy Corporation.

Paul Benneworth is a professor of innovation and regional development at the Western Norway University of Applied Sciences, Norway and a senior researcher at the Center for Higher Education Policy Studies at the University of Twente, the Netherlands. Paul researches the relationships between universities and societies; he has published and edited ten scholarly volumes, more than 70 peer reviewed journal articles and was a founding editor of the Open Access journal Regional Studies, Regional Science.

Alicia Betts is Head of Projects at the Catalan Association for Public Universities (ACUP) since 2009 and at the Global University Network for Innovation (GUNi) since 2014. Her work at ACUP focuses on joint internationalisation strategy development and implementation, university governance, funding and management policies, benchmarking studies and organisation of events. She has been actively involved in the "Internationalisation Plan of Catalan Public Universities 2010-2015" (2010), the OECD Reviews of Higher Education in Regional Development (Catalonia region), the European Drivers for a Regional Innovation Platform project (funded by the LLP) and the Platform for Knowledge, Territory and Innovation initiative. She has also collaborated with the Centre for Higher Education Policy Studies (CHEPS) on several of its research projects regarding the Catalan and Spanish higher education system. She studied Audiovisual Communication and International Relations at the Universitat Autonoma de Barcelona (UAB) and is a graduate of the European Master in Higher Education (Erasmus Mundus – HEEM, University of Oslo, University of Tampere, University of Aveiro).

Quim Bonastra is a geographer, artist, and independent curator. He holds a Ph.D. on Human Geography from the University of Barcelona and teaches Geography at the Faculty of Education, Psychology and Social Work at the University of Lleida on the degree in primary school education. He also teaches on some masters on Inclusive Education, Art, and Legal-Criminal Sociology at the Universities of Lleida and Barcelona. His research combines the fields of Spaces of Control (mainly quarantine stations, hospital prisons and learning spaces), Education (centered mainly on the role of art in education and the search for new ways of learning), and the relations between Art and Geography (working in the recent area of Creative Geographies or Geography of Art). He is a member of the editorial board of the scientific journal Scripta Nova / Geocrítica, of the Espai Híbrid pedagogical team and of the MITO artistic group.

Lihanna Borhan is an Associate Professor of Psychology at the International Islamic University Malaysia, focusing on educational psychology and developmental psychology. She is currently the Director of the Office of Knowledge for Change and Advancement at the University, tasked with ensuring that students' educational experiences will prepare them for the future. She not only works with students in classes, but also trains the academic staff and team of volunteers to work with children and adolescents. With a PhD in Psychology from the University of Chicago, her varied research and consultancy projects carry an underlying theme of enhancing human development, both in formal and informal settings.

Rosi Braidotti is a Philosopher and Distinguished University Professor at Utrecht University and director of the Centre for the Humanities in Utrecht. She has taught at the University of Utrecht in the Netherlands since 1988, when she was appointed as the founding professor of women's studies. In 1995 she became the founding Director of the Netherlands research school of Women's Studies, a position she held until 2005. She was a Leverhulme Trust Visiting Professor at Birkbeck College in 2005-6; a Jean Monnet professor at the European University Institute in Florence in 2002-3 and a fellow in the school of Social Science at the Institute for Advanced Study in Princeton in 1994. Influenced by philosophers such as Gilles Deleuze and especially "French feminist" thinker Luce Irigaray, Braidotti has brought postmodern feminism into the Information Age with her considerations of cyberspace, prosthesis, and the materiality of difference. Braidotti also considers how ideas of gender difference can affect our sense of the human/animal and human/machine divides. Braidotti has also pioneered European perspectives in feminist philosophy and practice and has been influential on third-wave and post-secular feminisms as well as emerging posthumanist thought.

Jordi Bruno has a PhD in Inorganic Chemistry from the Royal Institute of Technology (KTH), Stockholm, an Executive MBA from Stanford University and over 35 years of experience in the field of nuclear waste management, risk analysis and environmental management strategies. His main areas of expertise include evaluation of performance and safety of nuclear waste repositories, sustainability, chemical risk assessment and toxic/ hazardous and geological storage of CO_2. Since 2008, he has been the CEO and Chairman of the Board of Amphos 21 Consulting and since 2009 he has been the CEO and Chairman of the Board of the Amphos 21 Group. From 2000 to 2014 he was Director of the Enresa-Amphos 21 Chair on Sustainability and Waste Management at the Universitat Politècnica de Catalunya (UPC). He is the author or co-author of more than 130 peer reviewed papers and five books, as well as many presentations at international conferences and technical reports.

David Bueno is a professor and researcher in the Biomedical Genetics, Evolution and Development Section at the University of Barcelona, and is the Chair of UB-EDU1ST Neuroeducation. Specialising in genetics, neuroscience and developmental biology, his research is focused on the correlation between brain training and functioning, and behaviour, especially in learning processes. He teaches in the field of genetics, teacher training, dissemination and neuro-education. He has published more than 60 specialised scientific papers, 19 textbooks and essays and more than 600 scientific dissemination articles in different media. He has participated in the compilation of several encyclopaedic works, and has been the director of the "Ecosistemes dels Països Catalans" atlas. In 2010 he won the European Award for Scientific Dissemination. In 2018 he received the Magisterium Prize for his efforts to bring neuroscience closer to education, and in 2019 the *Claustre de Doctors* at the University of Barcelona awarded him a distinction for his dissemination work. He is a member of various think tanks on educational change promoted by the Government of Catalonia.

Carmen Caamaño is a professor in the Psychology Department and a researcher at The Institute for Social Research, University of Costa Rica. She is a Social Psychologist, holding a M.Sc. in Psychoanalytic Studies from The New School for Social Research, and a Ph.D.in Latin American, Caribbean, and U.S. Latinos Cultural Studies from the University at Albany, SUNY. Her research focuses on cultural and subjective transfor-mations under Neoliberalism, migration, and neoliberal trends in public universities.

Josep Casanovas is Professor in the Statistics and Operations Research Department at the UPC, specializing in High Performance Computing (HPC) and Simulation. Director of inLab FIB at Barcelona School of Informatics, UPC-BarcelonaTech, an innovation lab mainly focused on data science, smart mobility and cybersecurity (htttp://inLab.fib.upc.edu) and composed of more than 80 researchers and developers. His main research areas are Modeling and Simulation, Agent Based Modeling (ABM) and HPC. Author of research articles in the fields of ABM and HPC and Simulation, he has collaborated with many research and development projects for the EU and different companies and institutions. Director of the Center for Cooperation to Development (CCD) at the UPC (1993-2006 and 2012-2017). Coordinator of the Severo Ochoa Research Excellence Program in the Barcelona Supercomputing Center (BSC-CNS) (2012-2017). At present, he is leading the HPC Modelling and Simulation for Societal Challenges (HPC4SC) Research Group in the Computer Science Department at the BSC. This research group is mainly engaged in setting up multidisciplinary teams in an emerging area seeking to link Exascale computing and modelling and simulation applied to Social Sciences and Humanities. Specifically, this group is interested in innovating and gathering experience in platforms, methods and tools for HPC virtual experimentation in collaboration with researchers in the fields of demographics and migratory flows, population and ageing, and public policies applied to territorial and urban planning and their socio-economic impact in the medium and long term.

Irene Cambra-Badii obtained her Bachelor in Psychology and PhD in Psychology from the University of Buenos Aires (Argentina), where she was a researcher and instructor for more than ten years. She completed a postdoctoral training course at Pompeu Fabra University (Barcelona, Spain), where she is a member of the Research Group on Health Sciences Education in the Department of Experimental and Health Sciences. Since 2019 she has been a researcher in the Chair of Bioethics at the University of Vic – Central University of Catalonia (Barcelona, Spain). She is the author of "Doctor House and the question of truth. Bioethics and psychoanalysis" (2017). Her main research interests are currently the way bioethics principles are considered in feature films and TV medical dramas, as well as their use as a teaching aid in educational innovation.

Celia Caregnato holds a master's degree in Political Science (1992) and a PhD (2004) in Education, both obtained at the Federal University of Rio Grande do Sul. Furthermore, she completed a postdoctoral internship at the University of Wisconsin with Professor Michael Apple's research group in 2013. She was also the Dean of Research, Extension and Post-Graduation at UniRitter from 2004 to 2008. She has been an associate professor at the Federal University of Rio Grande do Sul, a member of the permanent body of the Program of Postgraduation in Education and she is part of the Research Committee in the Faculty of Education at this Federal University (2019-2020). She has also been a member of the following research groups and networks: The Research Group on Innovation and Evaluation at Universities, Education/CNPq and Study about Universities, Sociology/CNPq. Moreover, she is a member of the UNESCO Chair on Universities and Regional Integration, coordinated by Axel Didriksson. She studies and supervises research in the area of Sociology of Education relating it to Higher Education topics, with special attention to Student Trajectories and Educational Transitions. She has been also working with sociological and educational aspects within Sociology teaching.

Antonio Casado was awarded an MA by the National University of Ireland (Cork) and a PhD by the University of the Basque Country (UPV/EHU). After several periods abroad, he is now Research Fellow at the Philosophy of Values and Social Anthropology Department in the UPV/EHU, teaching postgraduate courses in contemporary ethical issues. From 2012 to 2017 he was Deputy Dean at the Philosophy and Education Sciences Faculty. He has published widely on environmental, research, and healthcare ethics. His authored or edited books include *Bioética para legos* (Plaza y Valdés, 2008), *Thoreau* (Antonio Machado, 2014), *Autonomía con otros* (Plaza y Valdés, 2014), and *Una casa en Walden* (Pepitas, 2017). He is part of the cultural action team at the UPV/EHU and a founding member of the stage and performing arts society (unea) on the Gipuzkoa campus.

Marta Cayetano works as a Communications Officer at the Catalan Association of Public Universities (ACUP) and the Global University Network for innovation (GUNi) since 2015. She is involved in the communication and dissemination of the H2020 European project TeRRIFICA (Territorial RRI fostering innovative climate action) and she has been working since 2015 as a comms officer at the H2020 HEIRRI project (Higher Education Institutions and Responsible Research and Innovation). During her professional career, Marta has worked in several institutions related to education, culture and NGOs, such as Saint John of God Foundation, SETEM Federation, Universitat Politècnica de Catalunya Barcelona-Tech and the Political Documentation Center Foundation of the Catalan government. She did an internship at CCCB Centre de Cultura Contemporània de Barcelona as a coordination assistant and volunteered abroad. She is also a current editor and contributor at *Culturalia* blog. Marta Cayetano holds a B.A. in Audiovisual Communication (Universitat Pompeu Fabra) and a B.A. in Translation and Languages (Universitat de Vic), as well as a Postgraduate Degree in Strategic Digital Communication (IDEC-UPF) and a Postgraduate Degree in International Development and Cooperation (Setem-UPC).

Stefano Chessa is a senior lecturer in Sociology of cultural and communication processes in the Department of Humanities and Social Sciences of the University of Sassari (Italy). He teaches Sociology of the family and of education and Social policies for families on Social Work degree courses (first and second cycle). He is a member of the FOIST Laboratory for Social Policies and Learning Processes. His main research areas are related to socialization and educational processes, educational policies, and policies for families.

Pilar Cid-Leal has a PhD in Communication Science, a BA in History and a BA in Library and Information Science. She is a Senior Lecturer at the Universitat Autònoma de Barcelona (UAB), where she started working in 1990. She has taught courses on several university degrees. Since 1990, she has participated in twelve funded R&D projects. She regularly publishes works on Information Science, Translation and Teaching Innovation. She is a member of the Tradumàtica Group and the co-director of the e-journal Tradumàtica, specialized in translation technologies. Her current research lines are Information Science applied to translation and Information retrieval.

Mariantonietta Cocco is a senior lecturer in Sociology of Cultural and Communication Processes in the Department of Humanities and Social Sciences of the University of Sassari (Italy). She currently teaches Sociology of intercultural processes and Sociology of migration policies on Social Work degree courses. She is a member of the FOIST Laboratory for Social Policies and Learning Processes. Her main study and research interests are related to human mobility processes. She is the author of several essays on the subjects of migration, education, social policies and development.

Marta Congiu works as a project manager in the FOIST Laboratory for Social Policies and Learning Processes of the University of Sassari (Italy), with five years of experience in European projects, Community Based Research¸ Responsible Research and Innovation and public engagement of universities. She is also the project manager of IntHum – Intercultural Laboratory for Research and Promotion of Human Condition, a social promotion association. Her educational background includes an MA in Foreign Languages for International Communication and a postgraduate master's degree in teaching the Italian Language and Culture.

Bartolo Cruz is PhD in Biosystems, Ecology and Management of Natural and Agricultural Resources. Level C Tenured Lecturer at the University of Guadalajara and member of the Academic Faculty: UDG-CA-1014 and the Ecology, Landscape and Society Laboratory at the Centro Universitario de la Costa in the city of Puerto Vallarta, Jalisco, Mexico. Coordination of sustainable tourism projects, publication of research articles and book chapters related to Sustainable Development, territorial planning and hydrology. Coordinator of the Master's in Developmental, Sustainability and Tourism Sciences at the UdeG. Research lines: Use of geographic information systems (GIS) in town and country planning and the sustainability of natural resources.

Maria Laura Cuffí obtained her PhD in Biology (Pharmacology) in 1990 at the University of Barcelona. She holds a position as Associate Professor of Pharmacology at the School of Medicine and Health Sciences at the University of Barcelona. Her work is focused on the effects of antipsychotic drugs and lithium on peripheral and central catecholamine receptors. She received a Wellcome Trust grant to study the pharmacological regulation of neuronal calcium channels with Prof. Dolphin at the University of London. She is currently involved in the molecular study of G-Protein Coupled Receptors oligomerization in Parkinson disease.

Monica Degen is a lecturer of Cultural Sociology at Brunel University London. Her research focuses on the politics of space with a particular interest in urban experience and embodiment and her work has focused on the UK, Spain and the Middle East. In 2016, she was awarded the esteemed British Academy Fellowship to research 'Timescapes of Urban Change'. She is the author of *Sensing Cities* (Routledge 2008) and has published in journals such as Urban Studies, Journal of Consumer Culture, and The Sociological Review to mention a few. She is currently working on the urban changes occurring in the Smithfield market area (www.sensorysmithfield.com) and on a new book with Prof G. Rose (Oxford University) on digital cultures and urban experiences, commissioned by Bloomsbury.

Haruaki Deguchi was invested as the fourth president of Ritsumeikan Asia Pacific University on January 1, 2018. He came to the university from a lengthy and successful career in business as cofounder of Lifenet Insurance, the first independent Japanese insurance company to be created for 74 years, where he served as President and Managing Director from the company's founding in 2006, until 2013 when he became Chairman and CEO. Previously, Mr. Deguchi enjoyed a career with Nippon Life Insurance that spanned nearly 35 years, including serving as president of the company's London-based subsidiary and general manager of the international business division. Mr. Deguchi has been appointed as a lecturer at Keio University and Waseda University, and has also served as an advisor to the Office of the President at the University of Tokyo. A historian and avid reader, Mr. Deguchi is also a prolific author and lecturer, having written more than 45 books, countless articles, and makes regular appearances on TV and in other media, including a monthly column for the Japan Times. He holds a degree from the Faculty of Law at Kyoto University.

Damián del Valle is a sociologist who graduated from the National University of La Plata (UNLP). PhD candidate in Education at the National University of Córdoba. Coordinator of the Regional Platform for University Integration - PRIU – IEC/CONADU. At present, he is the Institutional Links and Development Secretary of the National Arts University (UNA), where he is also a professor and researcher. He is an adjunct professor of Educational Policies at UNA and the Academic Coordinator of a post-graduate course entitled Research, Transfer and Development, given at the School of Social Sciences, University of Buenos Aires. As a book compiler, he has published *El Derecho a la Universidad en perspectiva regional; Universidad Pública y desarrollo*, and a recent series of contributions to CRES 2018: "Balance y desafíos hacia la CRES 2018"; "Política y tendencias de la Educación Superior en la región a 10 años de la CRES 2008" and "Internacionalización y producción de conocimiento".

Raúl Delgado is UNESCO Chair on Migration, Development and Human Rights. Professor and Director of the Doctoral Program in Development Studies at the Universidad

Autónoma de Zacatecas. Author/editor of 29 books and more than 200 book chapters and refereed articles. Guest lecturer in over 40 countries in every continent. President and founder of the International Network on Migration and Development, co-Director of the Critical Development Studies Network, and editor of the journal Migración y Desarrollo.

Romina Deriu is a senior lecturer of Sociology and teacher of Sociological Theory and Social Research and Sociology at the Department of History, Humanities and Education Sciences (University of Sassari - Italy). She is a member of the FOIST Laboratory for Social Policies and Learning Processes. Among various subjects she has studied local knowledge and tacit knowledge; sustainable development; social actors in complex societies; sustainable tourism; rural development; and community action research.

Gemma Derrick is the Director of the Centre for Higher Education Research & Evaluation and a Senior Lecturer (Higher Education) at Lancaster University. She graduated with a PhD in Science Communication (Research Evaluation) from the Australian National University. She has since held positions at the University of Sydney, Cancer Policy and Global Health King's College London, the Consejo Superior de Investigaciones Científicas (CSIC) in Spain and is a past ESRC Future Research Leader Fellow and British Academy Rising Star award holder. Her research focuses on the academic reward system specialising in peer review, academic productivity measurements, the implementation of indicator driven research, the evaluation of scientific and social impact (impact), gender debates in knowledge production, and evaluative cultures within global higher education. Gemma leads the COMbINE network (Complementary Methods in Evaluation Research), is a UK-representative for the Eu-COST Action ENRESSH (Evaluative Research in the Social Sciences and Humanities), as well as serving on the Steering Committee for the World Health Organisation's Evidence Informed Policy Network (WHO EVIPNet). Her book, *The Evaluators' Eye: Impact assessment and academic peer review* was released in February 2018.

Axel Didriksson is full and definitive researcher at UNAM, belonging to the Instituto de Investigaciones sobre la Universidad y la Educación (IISUE). Doctor of Economics, Master's in Latin American Studies and Degree in Sociology (UNAM). President of the Global University Network for Innovation (GUNi) for Latin America and the Caribbean. Education Secretary for Mexico City Federal District Government (2006-2009). Level III National Researcher (SNI). Coordinator of the UNESCO Chair on "University and Regional Integration" (from 1995 to present). Advisor to the UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC-UNESCO, from 1995 to present). Member of the Mexican Academy of Sciences (AMC).

Joan Elias is a Professor of Mathematics in the Department of Algebra and Geometry of the University of Barcelona. Throughout his academic life he has combined teaching, research in commutative algebra and management. He has been the principal investigator on several research projects, national networks and integrated actions in several countries. He was also the chief editor of the Royal Spanish Mathematical Society and a member of the publications committee of the European Mathematical Society. In the field of management, he has been the head of studies (1992-1993) and dean of the Faculty of Mathematics (1996-2002), Vice Rector of the University of Barcelona (2008-2010) and Secretary General of the Interuniversity Council of Catalonia (2006). He is currently rector of the Universitat de Barcelona (UB) and President of the Catalan Association of Public Universities (ACUP) and the Global University Network for Innovation (GUNi).

Zeinab El Maadawi is a professor at Cairo University and a senior e-learning expert at the United Nations University Institute for Environment & Human Security (UNU-EHS). She developed broad expertise in international education management in higher education & international development cooperation through coordinating multilateral development projects that addressed health education, science communication, e-learning capacity development, and Sustainable Development Goals (SDGs) orientation. She has been featured as a "Techwomen Emerging Leader" by the USA Department of State and a "Leader in Innovation Fellow" by the UK Royal Academy of Engineering. She is currently in charge of conceptualization, organization & management of institutional e-learning strategy at UNU-EHS in addition to research & teaching in the field of educational technologies & management of e-learning projects.

Dobrivoje Lale Eric is head of the International Cooperation Department at Serbia's Center for the Promotion of Science (CPN). The Center was founded in 2010 with the goal to align science and society, and establish firm relations between local and international actors and stakeholders. He is managing two national level EU

projects – European ARTificial Intelligence Lab (Creative Europe) and RRING (H2020), aimed at increasing AI literacy and its understanding among a general audience, and to emphasise the social relevance of the research and innovation process respectively. He is also the regional coordinator for the six SEE countries in the framework of the H2020 TeRRIFICA project that is developing and advocating innovative climate change adaptation and mitigation actions. He has also worked on many projects and initiatives dealing with research policies, STE(A)M education and art & science practices, while his main focus has recently been on climate issues and artificial intelligence. An Art Historian by formal education, he has worked for the Museum of Science and Technology and Mod'Art High School, both in Belgrade, and has diverse experience in architecture research, publishing, translation and advertising.

F. Xavier Escribano obtained his doctorate degree in Philosophy at the University of Barcelona. His research is focused on the theories and concepts of human embodiment, especially in contemporary thought, and the relationship between humanism and health. He is currently the coordinator of the SARX Research Group (Grup de Recerca en Antropologia de la corporalitat) and he teaches at the Universitat Internacional de Catalunya.

Chika Ezeanya-Esiobu is interested in indigenous knowledge, education and Africa's overall advancement. Chika has worked as a consultant for the World Bank on education and sustainable land management in Rwanda and in Nigeria, respectively. She has published several research papers, book chapters and a book, all on her research interests. Her other works include an International Development Research Center (IDRC) Canada commissioned project on utilizing indigenous technology to create employment for women in rural areas in Rwanda. Chika has conducted research for such organizations as the United Nations University World Institute for Development Economics Research (UNU-WIDER), United Nations Research Institute for Social Development (UNRISD), the Swedish International Development Agency (Sida) and the African Economic Research Consortium (AERC). Some of Chika's writings can be found on her blog, ChikaforAfrica. She is presently an executive director of African Child Press, in addition to being a senior researcher at the University of Rwanda.

Linden Farrer is a Policy officer in the 'Mainstreaming Responsible Research and Innovation (RRI)' sector in the RTD-B2 'Open Science' unit of DG Research and Innovation (European Commission). Before joining the Commission he worked for civilian social and health organisations on European projects, primarily in Brussels, and for a local government in the south-east of England on employability. His background is in the social sciences and humanities.

Carme Fenoll has been the head of the Rector's Bureau at the UPC since January 2018. She was the head of the Library Service of the Catalan Government's Ministry of Culture from 2012 to 2017. She holds a diploma in Library and Information Science from the University of Barcelona, a degree in Information Science from the Universitat Oberta de Catalunya and a master's degree in Cultural Management. Her career has been closely linked to public libraries. She is a member of several boards on culture and education. In her career as a librarian, she was involved in projects such as Arteca (lending of works of art), Bibsons, Bibliowikis (a collaboration with Wikipedia), 10x10 (publisher-librarian meetings) and Biblioteques amb DO, an initiative linking libraries and winemaking. She is the author of numerous papers related to librarianship, culture and education.

Ana María Fernández is co-founder and President of Education First Inc. She has a BS in Early Childhood Ed. and a master's degree in International School Administration from TCNJ University in USA. Ana Maria is the author of the VESS (Meaningful life with balance and wisdom) Educational Model that has been implemented by over 100 schools in America and Europe. Ana Maria has over 25 years of experience in the educational field. She has dedicated her life to the study and understanding of early childhood development. She is an international adviser for schools aiming to transform education into active sustainable cultures of thinking and learning, and for schools seeking to implement the VESS Model in their philosophy. She is a certified trainer for the De Bono Group on Six Thinking Hats and Parallel Thinking as well as for USA Thinking Maps. Ana Maria has been invited to present her work at multiple international conferences. Promoter of the Chair of Neuroeducation UB-EDU1ST.

Andrea Fernández is a PhD candidate in the Faculty of Education at the University of A Coruña (Spain). She holds a degree in Educational Sciences and a master's degree in Leadership and Innovation of Educational Institutions and she is studying Pedagogy. She attended several summer courses at the University of Oslo (Norway), Linnaeus University (Sweden) and University of Naples

Federico II (Italy). Her research focuses on attitudes and interests towards science and technology from a gender perspective. Her interests revolve around the critical curriculum, the role of women in science, science and technology attitudes and STEM.

Gabriel Fernández-Borsot holds a degree in Industrial Engineering from the Universitat Politècnica de Catalunya, a degree in Philosophy from the University of Barcelona, and a PhD in Transformative Studies from the California Institute of Integral Studies of San Francisco. His research is focused on the transdisciplinary analysis of otherness, the study of consciousness, and the anthropological implications of technology. He teaches at the Universitat Internacional de Catalunya.

Teresa Fèrriz is an intrapreneur at the Office of the President at the UOC, where she detects people's needs, as well as opportunities, in both internal and external contexts and promotes new projects. She is currently the director of the lletrA project (Catalan literature online). She has worked as a professor and researcher at the UNAM, the College of Mexico, the University of Guadalajara and the Colegio de Jalisco in Mexico and the Universitat Autònoma de Barcelona and the University of Lleida in Catalonia, and as a cultural manager at the 2004 Forum in Barcelona. She has bachelor's degrees in Information Science and Philology and has taken postgraduate courses in communication, multimedia design, cultural management, food communication and cultural cooperation with Latin America. She wrote her doctoral thesis on Catalan Republicans in exile in Mexico.

Àngel Font holds a PhD in Economics (Barcelona Ramon Llull University) and a Degree in Chemistry (Barcelona University). He also has a diploma in Business Management from EADA. He began his career as environmental engineer, and subsequently joined Intermón Oxfam where he held different management positions, first in programs serving as Latin America Desk Officer and after as a Deputy Director, where he was liaison officer with Oxfam, and strategic planning manager. He funded the Un Sol Món (One World) Foundation financed by Caixa Catalunya, where he runs job placement, social entrepreneurship, and social housing and microfinance projects. In 2010 he joined the "la Caixa" Foundation, as coordinator of strategic development, position that combined with the Human Resources Management of the Foundation. In 2014 he joined the Executive Committee of the Foundation, where he serves as a secretary. Currently is the Corporate Director of Research and Strategy.

Anna Forés is a doctor of Philosophy and Education Sciences and a graduate in Pedagogy from the University of Barcelona. Her professional and academic background has focused on education, especially resilience and neuro-education. She has been a speaker and lecturer on masters and teacher training courses in different Latin American countries. She has published more than 40 scientific articles in specialist journals. She has written 16 popular and academic books. She regularly appears in the press and on radio and television. She was also the co-author of *Resiliencia* (2008), *Asertividad para gente extraordinaria* (2009) and *Neuromitos en educación* (2015), all published by Plataforma Editorial. Deputy Director of the Chair of Neuroeducation UB-EDU1ST.

Paulo Franchetti is a retired full professor of Literary Theory at the University of Campinas, in Brazil. For 11 years he was the president of Editora da Unicamp (Unicamp University Press). His doctoral degree in Literature was received in 1991 from the University of São Paulo. He has published 7 books, 44 book chapters and edited 14 books. He has also published 69 papers and presented about 200 conferences worldwide on literary and editorial subjects.

Marta Fuentes is a doctor of Psychology in Education, Magister in Teaching Behavior, in Teaching and Learning Strategies and in Multimedia & Education. She has a degree in Psychopedagogy and a Diploma in Education Sciences. She is a professor and researcher at the Department of Basic, Evolution and Education Psychology at the Universitat Autònoma de Barcelona (UAB). She collaborates regularly with the Universidad Nacional Autónoma de Nicaragua (UNAN-Managua) and the Universitat Oberta de Catalunya. She coordinates a teaching innovation and research group on Teaching Practice at the UAB. She is a member of the SINTE research group. Her research interests are the processes, environments and strategies of teaching, learning and evaluation, teamwork, online training, and information and communication technologies applied to education. She has contributed to and led several research projects funded at a national and European level. She is currently participating in the ProjecTA-U project on machine translation (MT) and the impact on students as potential MT users.

Philippe Galiay was Head of the 'Mainstreaming Responsible Research and Innovation (RRI)' sector in the RTD-B2 'Open Science' unit of DG Research and Innovation (European Commission) until July 2019. This sector is

in charge of the promotion and monitoring of the RRI cross-cutting issue in Horizon 2020, the EU Framework Programme for Research and Innovation (2014-2020). The sector is also in charge of Citizen Science, a component of both Open Science and RRI.

Marina Garcés is a philosopher and full university professor. After fifteen years at the University of Zaragoza, she is currently an associate professor at the Open University of Catalonia, where she manages the Masters in Philosophy for contemporary challenges. Her latest books are *Un mundo común* (Bellaterra, 2012) *Filosofía inacabada* (Galaxia Gutenberg, 2015), *Fuera de clase* (Galaxia Gutenberg, 2016), *Nueva ilustración radical* (Anagrama, 2017, Ciutat de Barcelona Essay Award 2017) and *Ciudad princesa* (Galaxia Gutenberg, 2018). Since 2002, she has also been working on the collective thinking programme titled Espai en Blanc. She believes in the statement of commitment to life as a shared problem and her philosophy involves widespread experimentation with ideas, learning and ways of intervening in our modern world.

Mª Ángeles García holds a PhD in Linguistics (Spanish) from the University of Barcelona (Spain). She is a Professor in the Department of Spanish Philology at the University of Barcelona. Her work is focused on Spanish for specific purposes (Professional Discourse), with emphasis on the linguistic and pragmatic analysis of digital and audiovisual discourses in professional environments (digital and audiovisual journalism), aiming to propose strategies to improve the effectiveness of digital texts and to design professional writing techniques for multimodal discourses.

Valentina Ghibellini is a social worker in a municipality in Sardinia (Italy) and a junior researcher in social sciences at FOIST Laboratory (University of Sassari - Italy) and at IntHum – Intercultural Laboratory for Research and Promotion of Human Condition. Her research interests are Community Based Action Research, Social work, Evaluation of social policies, programs and projects and Public Engagement in Higher Education. Within the K4C Programme, she is a mentor accredited in Community Based Research by the UNESCO Chair in Community Based Research and Social Responsibility in Higher Education.

Rosa M. Gil is currently an associate professor in the Departament d'Informàtica i Enginyeria Industrial at the Universitat de Lleida. He teaches at the University of Lleida on the degrees in Computer Science, Digital Design and the masters in Marketing, and also on the UX master's degree at Universitat Pompeu Fabra. She is also a visiting professor on the master's degree in software engineering at the Faculty of Computing at the University of Granada. She has a PhD in Computer Science and Digital Communication from Universitat Pompeu Fabra. She has a postgraduate degree in psychology from the Fundació Universitat de Girona and a degree in physics from the University of Barcelona. Her lines of research are in artificial intelligence and ethics, HCI, measurement of emotions with metric devices, multiculturalism and technological interaction with art. She has been on research visits to Stanford (Palo Alto, USA), MIT (Boston, USA), Oslo University (Oslo, Norway), NUI (Galway, Ireland), University of Auckland (New Zealand), CNRI (Rome, Italy) and ENST-Bretagne (Brest, France).

Fernando Giráldez is a professor of Physiology at the Universitat Pompeu Fabra, Barcelona. He worked for many years in Neuroscience and Developmental Biology, focusing on the mechanisms of the development and function of sensory organs. He has published about one hundred articles in international journals and books, and has been a guest speaker at various universities, research institutes, scientific meetings and symposia. Expert and panel member for research agencies and referee for international journals, founder member of the Spanish Society of Developmental Biology (SEBD). Fernando has not run a research laboratory since June 2017, but remains active in scientific writing and teaching. With broad experience in graduate and post-graduate education, he also developed courses on Neuroscience for the Humanities and Social Sciences, and is regularly involved in science dissemination, including talks at schools, courses and events for the community.

Victoria Gómez is Project Officer at the Association of Catalan Public Universities (ACUP) and the Global University Network for Innovation (GUNi) since 2017. At ACUP, she focuses on internationalisation and the social responsibility of universities. At GUNi, she coordinates the SDGs project and the Higher Education in the World Report. Victoria holds a Bachelor's Degree in English Studies from the University of Barcelona (UB) and a Master's in International Relations from the Barcelona Institute for International Studies (IBEI). She participated in the graduate exchange programme within the MA of Global Affairs at the American University in Cairo (AUC).

Damià Gomis is Professor of Physics of the Earth at the University of the Balearic Islands (UIB) and carries out his research at IMEDEA, a joint Research Institute between UIB and the Spanish Research Council (CSIC). In the last two decades his major research line has been the marine climate, paying particular attention to sea level variability. He has focused on understanding both the sea level variability observed in recent decades (particularly in the Mediterranean Sea) and future regional climate projections of sea level and other parameters of interest (e.g. temperature, salinity and waves). He currently combines his research on the physical basis of climate change, as Head of the Sea Level and Climate research group (http://marine-climate.uib.es/), with the confrontation of Climate Change from a more holistic approach, as Director of the Interdisciplinary Laboratory on Climate Change of UIB (http://lincc.uib.eu/). He also participates in several national and international committees, such as Future Earth or MedCLIVAR.

Marta Gràcia holds a PhD in Psychology from the University of Barcelona (UB). She is a professor in the faculty of Psychology at the same University and Coordinator of the interuniversity research group "Communication, Oral Language and Diversity". She is currently the main researcher of the interuniversity project "The Decision Support Systems for Decision Making (SSD) and the development of linguistic competence (speaking and listening)" funded by the Spanish Ministry of Economy and Competitiveness and participates as a researcher in other international projects. Her research interests are focused on the development of communicative competence, the construction of digital tools for professional development in the educational field, and early intervention and work with families. She is the coordinator of an Interuniversity Doctoral Programme in Educational Psychology (UB). She has published numerous articles in academic journals, books and book chapters.

Elena Guardiola holds an MD (Degree in Medicine and Surgery; University of Barcelona, 1983) and a PhD in Medicine (Autonomous University of Barcelona, 1993). She is a specialist in Occupational Medicine and has a diploma in industrial medicine (1984). She has specialized in biomedical writing and editing and in medical and scientific information and documentation, expanding her education in the USA and in several European countries. She has been an associate professor at the Department of Experimental and Health Sciences at Pompeu Fabra University and has regularly collaborated with the UPF, Ramon Llull University, the University of Barcelona and, since January 2019, the University of Vic - Central University of Catalonia. Some of her main areas of interest are pharmacology, medical and scientific publication, medical language, scientific evaluation, medical Information and documentation, medical humanities, the relationship between art and science, and the history of Catalan medicine.

Daniel Gutiérrez-Ujaque is a primary school teacher and Ph.D. student in the Geography and Sociology Department at the University of Lleida (Spain). His Ph.D. focuses on developing an inter-transdisciplinary project between the Social Work Degree and Industrial Engineering Degree within Higher Education. The aim of his research is to configure valuable new learning experiences that provide rhizomatic methodologies within higher education by developing a range of embodied, sensorial and social emplaced practices. He took a Bachelor's Degree in Primary Training and was awarded the Extraordinary Prize for his Master's Degree in Inclusive Education, both at the University of Lleida. His experience in the education field had enabled him to work as a museum guide and in the Education Department at the Fundació Sorigué (Lleida, Spain), working on the contemporary exhibit "In the beginning was…" by the Japanese artist Chiharu Shiota.

Sara Guyer is a Kellett Professor of English at the University of Wisconsin-Madison, where she directed the Center for the Humanities from 2008-2019. She is the President of the international Consortium of Humanities Centers and Institutes and director of the World Humanities Report. She is the author of two books on romanticism and its legacies, Romanticism After Auschwitz (2007) and Reading with John Clare (2015).

Budd Hall is the co-chair of the UNESCO Chair in Community-Based Research and Social Responsibility in Higher Education. He is a professor of community development at the School of Public Administration and the secretary of the Global Alliance on Community-Engaged Research. He is the founding director of the Office of Community Based Research and former dean of education at the University of Victoria. He holds an honourable doctorate from St. Francis Xavier University and has been working on issues of knowledge and democracy since 1970, when he was working in Tanzania. He has published five books in recent years on issues of community based research and engagement. He is also a poet.

John Hartley is a John Curtin Distinguished Professor at Curtin University. His research and publications focus on popular media and culture, journalism, the creative industries and cultural science. He was founding editor of the International Journal of Cultural Studies (1998-2018). He has held executive positions at Cardiff University and Queensland University of Technology and was an Australian Research Council Federation Fellow (2005-10).

Alicia Hernández is a Doctoral candidate at the Research Center in Food and Development, A.C. (CIAD, A.C.). Master's in Education Innovation (with honors) from the University of Sonora. Currently a researcher and doctoral candidate in Regional Development at the Research Center in Food and Development, A.C. Research visits to the University of Granada and the National University of Cordoba, Argentina. She has participated in national and international academic and scientific events as an attendee, speaker, main guest and coordinator.

Daniel Innerarity is a professor of political and social philosophy, IKERBASQUE researcher at the University of the Basque Country and director of the Instituto de Gobernanza Democrática. He is a doctor of Philosophy, and furthered his studies in Germany, an Alexander von Humboldt Foundation scholarship holder, Switzerland and Italy. He has been a guest lecturer at different European and American universities, recently at the Robert Schuman Centre for Advanced Studies at the European Institute, Florence, and also at the London School of Economics. He is currently Associate Director of Studies at the Fondation Maison des Sciences de l'Homme, Paris.

Arne Jarrick is a professor of history at Stockholm University (SU). He received his PhD in Economic History from SU in 1985. He has held many leading positions in the national as well as the international research funding system, such as Secretary General for the Humanities and Social Sciences at the Swedish Research Council (VR, 2007-2012), the scientific board and research council of Wenner-gren foundations (2013-), the board of HERA and Norface (2007-2012), etc. He is a member and was until recently second vice-president of The Royal Swedish Academy of Sciences and is a member of the Royal Swedish Academy of Letters, Antiquities and History.

Agnieszka Jelewska is director of the Humanities/Art/Technology Research Center at Adam Mickiewicz University in Poznań. She is an author of several books and many articles from the fields of environmental humanities, experimental practice and collaborative work connecting art, science and technology. She is also a curator of art and science projects, such as Transnature is Here (2013), Post-Apocalypsis (2015), Anaesthesia (2016) Arthropocene (2017).

Jordi Jiménez was born in Sabadell (Barcelona) in 1996. He holds a BA in Philosophy (first-class honours) from the Universitat Autònoma de Barcelona and a Double MA in Political Philosophy and Political and Legal Theory from Pompeu Fabra University and the University of Warwick. Since 2017 he has been the director of the Philosophy area of Ateneu Barcelonès, a prestigious private cultural institution based in Barcelona, where he organizes lectures and seminars with scholars form around the world. He is also a member of the Catalan Society for Philosophy and the Spanish society for Medieval Philosophy. He has collaborated with newspapers like Elnacional. cat and coordinated publications like Quadern magazine. He has also collaborated with some academic journals, such as Enrahonar and Audens. He currently works at the Catalan Culture Congress Foundation and is part of deba-t.org.

Martí Jiménez is Head of Global Programs at SciTech DiploHub. He has international experience working in biomedical research, business development and policy advice in Spain, Germany and the USA. He has contributed to several working groups and publications in the fields of technology transfer, innovation policy and digital regulation. He holds a degree in Biomedical Sciences from the University of Barcelona.

Gloria Jové has focused her scientific career on teacher training based on inclusive schools. She started her scientific production in critical pedagogy and action research, looking at ways to change educational models that do not help people processes. Since 2007, she and her research team have learned to communicate and think about art, especially contemporary art, to expand knowledge, and become aware of the heterogeneous training processes within higher education. This has enabled her research to expand on a methodology based on how learning around art, through inter and transdisciplinarity practices and using the community resources offered by the territory and public space, can be used in training and make us thoughtful, creative, critical, inclusive and professional teachers.

Jooyoung Kim is the Director of the Mobility Humanities Education Center (MHE) and Deputy Director at the Academy of Mobility Humanities, Konkuk University. In

addition to being an HK Professor, Jooyoung is a literary researcher who interprets mobility in terms of multiculturalism, diaspora, and gender. She has co-authored other books including Criticism of Korean Multiculturalism (2016) and Literature, Nation, and State (2012).

Marcelo Knobel is the 12th rector and a full professor of Physics at the University of Campinas (Unicamp), in Brazil. He is also a member of the Board of Directors of the Brazilian Center for Research in Energy and Materials (CNPEM). Prior to becoming rector, Knobel served as executive director of the Brazilian Nanotechnology National Laboratory (LNNano) at CNPEM. He has also held several leadership roles at Unicamp, including vice-president for Undergraduate Programs (2009-2013). Knobel received both his bachelor's (1989) and his doctoral (1996) degrees in Physics from Unicamp. He is an Eisenhower Fellow (2007), Fellow of the John Simon Guggenheim Memorial Foundation (2009) and Lemann Fellow (2015). He has published more than 250 scientific papers and is the author of 15 book chapters.

Nandita Koshal is a Research Associate at the International Institute for Higher Education Research and Capacity Building, O.P. Jindal Global University. She is interested in macroeconomic research and analysis, policy advice and consultation for capacity building in the social development sector. She was a key contributor in the drafting of the State Higher Education Plan under the National Education Mission for the state of Haryana, India. She has appeared at international conferences and has also published in the area of education reforms and policy, both nationally and internationally. She is currently basing her research on exploring the intersection between higher education, technology and policy.

Michal Krawczak is program director of Humanities/Art/Technology Research Center, director of the Stanisław Lem Laboratory for Experimental Media at Adam Mickiewicz University in Poznań. Author, designer and curator of art and science projects, such as Transnature is Here (2013), Post-Apocalypsis (2015), Anaesthesia (2016) Arthropocene (2017). His main fields of research are: art & science, environmental studies, social robotics, artificial intelligence and technological natures.

Ignasi Labastida is the Head of the Research Unit at the CRAI of the UB, and is one of the authors of the LERU Roadmap. Ignasi has been with the CRAI since 2006 where he has worked in the areas of open access, open data and open policies. He is also a member of the Steering Committee of the LERU Community of Chief Information Officers. Ignasi will disseminate the outcomes of LEARN to his national colleagues and to the LERU CIO Community in order to adopt the LEARN Toolkit at an institutional level.

Carles Lalueza-Fox is a Research Professor at the Institute of Evolutionary Biology (CSIC-UPF). He is a leading scientist in Europe on paleogenetics, and one of the few experts in the field that has been active since the mid-nineties. His research covers several lines, including the phylogenetic analysis of some extinct species, the genomic analysis of human populations of the past -including archaic hominids such as Neanderthals- and the retrieval of ancient pathogens. He also participated in the Neanderthal Genome Project. He has published more than 130 scientific papers, including several in Nature, in Science and in PNAS, which are considered the three main generalist science journals. In addition to his work as a researcher, Lalueza-Fox is committed to science outreach and has published eleven popular science books, mainly on diversity and racism, ancient DNA, Neanderthal genomics and De-extinction.

Aurora Lechuga is studying for a PhD in Pedagogy at the Autonomous University of Mexico (UNAM) at Ciudad Universitaria. He has masters and bachelor's degrees in Pedagogy from the same university. He has attended national and international conferences in Ecuador and Argentina on the subject of Artistic Education. He is currently conducting a research project on education for public universities of the arts in Latin America and the Caribbean, namely La Universidad Nacional de las Artes (UNA), Argentina, El Instituto Superior de Artes (ISA), Cuba, La Universidad de las Artes (Arte y Cultura), (UARTES) and La Universidad Nacional de Experimentación de las Artes (UNEARTE), Venezuela. The study forms part of the UNESCO Chair on "University and Regional Integration" Seminars directed by Dr. Axel Didriksson Takayanagui.

Marta Llop began her career as a Social Sciences teacher (1985-1990). She then went on to become Head of Andorra's Education Department (1990-2004), head of studies at Santa Coloma Secondary School in Andorra (2004-2014); and a teaching specialist under the PERMSEA strategic plan (2014-2018). In the current 2018-19 academic year, she is combining her work as a teaching specialist and head of studies. Author and/or coordinator of a number of education-related publications in the field of social sciences for Andorra's

Department for Education (1990-2006). Teacher trainer in the areas of teaching and education (1999-2018).

Francisco López is an associate senior lecturer at the Higher Institute of International Relations (Cuba), and the Universidad Externado de Colombia. He is a consultant to the Global University Network for Innovation (GUNi-ACUP), Barcelona, for which he was Academic Advisor (2004-2012). He is a doctor of Latin American and Hispanic Studies (1995), Paris VIII, Sorbonne. He has been a Visiting Lecturer at more than 14 universities and a guest speaker at more than 120 conferences. These include: Oxford, Sorbonne, Boston College, Berkeley, Stanford, Riverside, UCLA, Universitat Politècnica de Catalunya and UNAM. He worked for UNESCO between 1994 and 2002 as Regional Councilor for Social Sciences in Latin America and the Caribbean and Director of the UNESCO International Higher Education Institute for Latin America and the Caribbean (IESALC). Member of the UNESCO Forum on Higher Education, Research and Knowledge (2002-2009). Director of the UNESCO journal on "Higher Education and Society" (1999-2001). Author of 37 books and author or co-author of chapters in 42 books, some of these in various languages, mostly on issues of higher education, Latin American studies and prospection.

D. B. Lortan is an Associate Professor of Mathematics at the Durban University of Technology where he has held several leadership positions (including Executive Dean, Acting Senior Director: Engagement, and Acting Deputy Vice-Chancellor: Academic). He has a keen interest in Community Engagement (CE). His involvement with CE began in 1997 through a project marketing STEM professions to high school students. He has served as a Board member of the Sekusile, a Basic Adult Education Community Centre and the Jirah Academy. The primary focus of both of these organisations is the provision of post-school training and local community skills development. As his management duties at the Durban University of Technology increased in various capacities, his role became more advisory in nature. Since 2011, he has served on the Board of the South African Higher Education Community Engagement Forum (SAHECEF), a group of community engagement directors/managers from universities across South Africa.

Savathrie Maistry is a Research Associate at the Durban University of Technology where she has been responsible for developing the curriculum of a Community Development Degree Programme. She supervises postgraduate students in Community Engagement and Articulation within the South Africa Post School Education and Training sector. Dr Maistry has held numerous positions at a number of institutions around the globe, including director of Community Engagement at Rhodes University; senior lecturer in Social Work and Community Development at the University of Fort Hare, South Africa; lecturer in community development and women and gender studies at the Centre for Continuing Education, University of Waikato, New Zealand. She also served as the Africa Region Programme Manager for Volunteer Services Abroad, New Zealand. She has extensive experience in social work and community development practice, management, education and research supervision.

Fatima Marinho is a Full Professor in the University of Porto. She was Vice-President of the University of Porto (June 2014 – June 2018) and Dean and President of the Scientific Board of the Faculdade de Letras [Faculty of Humanities and Social Sciences], (2010 – 2014). She is a Member of the IAU (International Association of Universities) Administration Board (2016-2020), expert on the Haut Conseil de l'Évaluation de la Recherche et de l'Enseignement Supérieur, France (2017) and of the Evaluation and Accreditation Agency for Higher Education, Portugal (2018). The French Government honored her with the title of «Officier de l'Ordre des Palmes Académiques» (November 2015). Her field of interest is Portuguese Literature (Historical Novels and Portuguese 20th century Poetry). She has appeared at many conferences in several countries and has authored several publications (books, book chapters and papers in journals).

Meritxell Martell is the founder and director of Merience, a consultancy company focused on environmental risk governance, including analysis and development of communication and stakeholder engagement strategies and methodologies in the field of complex socio-technical processes. Dr. Martell is a graduate from the Universitat Autònoma de Barcelona (UAB, Barcelona, Spain) and she received her PhD in Environmental Sciences from the University of East Anglia (UEA, Norwich, United Kingdom) in 2001. She lectures at UPC and UPF on environmental communication graduate courses. In addition, Meritxell has successfully participated in and coordinated several European projects and is an expert consultant to different international organisations, such as the International Atomic Energy Agency (IAEA), the Joint Research Centre (JRC) of the European Commission and the OECD Nuclear Energy Agency.

Josep Lluís Martí is the Vice-rector of innovation projects, co-coordinator (together with Josep Maria Antó) of the Planetary Welfare Project and a professor of law philosophy at Pompeu Fabra University. His research focuses on the theory of democracy, and especially deliberative democracy and participatory democracy, global governance and the use and impact of new technologies for and in democratic systems. As vice-rector, he also coordinates the EDvolució Project for the innovative transformation project of the educational system at Pompeu Fabra University.

Federico Mayor Zaragoza is a Spanish scientist, politician, scholar and social change activist. Director-General of UNESCO (United Nations Educational, Scientific, and Cultural Organization, 1987-1999). He was originally a professor of Biochemistry at the University of Granada, where he later held the post of Chancellor (1968-1972). He pioneered neonatal diagnosis and the treatment of diseases that can lead to irreversible neonatal damage. At the Autonomous University of Madrid (UAM) in 1973 he was the Co-founder of the Centre of Molecular Biology "Severo Ochoa". Minister of Education and Science (1981). Chair of the European Research Council Expert Group (2003). Co-President of the Commission that gave rise to the UN Alliance of Civilizations Programme (2006). Chair of the International Commission against the Death Penalty (2010-2017). At the UAM in 2016 he set up the Institute of Human Rights, Democracy, Culture of Peace and Non-Violence (DEMOS-PAZ).

Alberto Merler retired a few years ago from the University of Sassari (Italy) where he served as full professor of Sociology. He directed courses on Education and Social Work, as well as the PhD programme on Social sciences. His research activities cover a wide range of interests: from social policies and organized solidarity to human mobility and education. He has a solid record in community based research and co-operative inquiry. In 1977 he founded the FOIST Laboratory for Social Policies and Learning Processes. He is a founding member of IntHum – Intercultural Laboratory for Research and Promotion of Human Condition where he is presently Director of research and international cooperation.

Analía Minteguiaga has a Ph.D. in Social Science Research with a specialization in Political Science from the Latin American Faculty of Social Sciences (FLACSO-Mexico); a Master in Social Policy, from the University of Buenos Aires (UBA); and a Bachelor's degree in Political Science, from the University of Buenos Aires (UBA). She is cur-

rently a tenured professor-researcher at the National Institute of Higher Education of Ecuador (IAEN). In 2013 she received a research grant from the Latin American Council of Social Sciences (CLACSO-Asdi) within the "Study on Public Policy in Latin America and the Caribbean, Democracy, Citizenship and Social Justice" program. In addition, she was a researcher for the National Council of Scientific and Technical Research of Argentina (CONICET). At present she coordinates the working group "Welfare Schemes in the 21st Century" (CLACSO) and is a member of several academic networks. Her latest published books include: Oscillations in Educational Quality in Ecuador, 1980-2010 (2014); Quality Evaluation of Ecuador's higher Education. The Experience of Mandate 14 (2014); and The public aspect of public education: the educational reform of the nineties in Argentina (2009).

Lucy Montgomery leads the Innovation in Knowledge Communication research program at the Centre for Culture and Technology at Curtin University, Australia. She is also Director of Research for KU Research: a close-knit team of researchers and publishing industry practitioners working together to help realise the possibilities of digital technology and Open Access for specialist scholarly books and the communities that care about them.

Roberto Moreno was born in the city of Guadalajara, Jalisco, Mexico. Geographer, MA in Administration and PhD in City, Territory and Sustainability from the University of Guadalajara. During a doctoral visit he specialised in Public Policies at the Universitat Autònoma de Barcelona, Spain. He has authored several publications and book chapters on regional economic development issues and is the author of the book "La lucha contra el hambre en México, una interpretación Neo-institucional". His lines of research deal with institutionality and regional economic development. He has worked on various occasions with the Mexican government. He was Director of the Regional Centre for Business Quality, CReCE, at the Centro Universitario de los Valles en Ameca, Jalisco. At present, he is a full-time lecturer-researcher at the University of Guadalajara and a visiting postgraduate lecturer at various private universities in Mexico.

Cameron Neylon is a Professor of Research Communications at the Centre for Culture and Technology at Curtin University, and Director of Knowledge Unlatched Research. He was a founding Director of FORCE11 and a contributing author to the altmetrics manifesto, the Panton

Principles for Open Data and the Principles for Open Scholarly Infrastructure. He has been a biochemist and a technologist, worked in scholarly publishing as an advocate for Open Access, and now focuses on studying the changing cultures and institutions of academia.

Sijbolt Noorda is currently president of Magna Charta Observatory, Bologna. He is a former president of the Dutch Association of Research Universities, president emeritus of Universiteit van Amsterdam and a former Board member of the European University Association. He received his formal education in The Netherlands (Groningen, Amsterdam, Utrecht) and USA (New York City). Dr Noorda writes and lectures on teaching and learning in Higher Education, about ideals and practices of internationalization, on open science, core values and governance issues in HEIs. He regularly reviews and gives advice to individual universities and national systems in the European Higher Education Area.

Akpezi Ogbuigwe is the former Head of Environmental Education and Training at UNEP and the former Coordinator of the Ecosystem Management Programme, UNEP. She is also the founder of the Anpez Centre for Environment and Development. Between 2010 and 2012, she was a Guest Professor of the prestigious Tongji University, Shanghai, China. She currently serves as a Juror for the UNESCO-Japan Prize on ESD; Adviser to the African Region, UNU Regional Centres for Expertise; and is a Council Member of Earth Charter International. She has over thirty years of professional experience as a Law teacher and is an avid researcher of transformational change in higher education in Africa, environmental law and policy, and sustainable development; she is a facilitator of university partnerships and is involved in civil society engagement. She has been a recipient of awards and honours such as the Environmental Creation Awareness Award from the Environment Outreach Magazine (2010). She is also a Rachel Carson Distinguished Lecturer at the Centre for Environmental & Sustainability Education of Florida Gulf Coast University. She has contributed to knowledge in the field of environmental law and education for sustainable development through several published articles in international journals and book chapters.

Julia Olmos-Peñuela is an assistant professor at the Management Department of the University of Valencia. Julia's research interests relate to science-society interactions, with a focus on researchers' engagement in knowledge production, transfer and exchange, and the area of Social Sciences and Humanities (SSH). She has published her findings in a range of academic journals (such as Research Policy and Minerva) as well as in more popular outlets.

Alireza Omidbakhsh is the Director of Cultural and Social Affairs and assistant professor of Literatures and Cultures at the University of Allameh Tabataba'i in Tehran, Iran, where he teaches both Spanish and English languages and literature. His research areas are literary theory, science fiction, and intercultural comparative utopian studies focusing on English, Spanish, Persian, and Islamic utopias. His publications include "The Virtuous City: The Iranian and Islamic Heritage of Utopianism". Utopian Studies, Vol. 24, No. I, 2013: The Pennsylvania State University, University Park, PA., USA and "The Roots of Dystopia in Iran," published in Trans/Forming Utopia: "The Small Thin Story" (Oxford: Peter Lang, 2009).

Hèléne Périvier is an economist at the French Economic Observatory (OFCE-Sciences Po) and professor at Sciences Po. She runs PRESAGE, Sciences Po's gender studies programme, and the "social and family policy evaluation" division of the French Economic Observatory. She is a member of the French High Council for Family, Infancy and Old Age (HCFEA) and of the Scientific Council of the French Observatory for Early Childhood. She coordinated the European project Effective Gender Equality in Research and the Academia (EGERA) 2014-2017. She is currently working on a research project for a French National Agency on Discriminations, Orchestras and Gender.

Daniela Perrotta is a researcher on the National Council of Scientific and Technological Research (CONICET) based at the University of Buenos Aires (UBA). Political Scientist (UBA), PhD in Social Sciences (Latin American School of Social Sciences, FLACSO). Program coordinator at the Latin American Council of Social Sciences (CLACSO).

Michael A. Peters is a Distinguished Professor of Education at Beijing Normal University Faculty of Education PRC, and Emeritus Professor in Educational Policy, Organization, and Leadership at the University of Illinois at Urbana–Champaign. He is the executive editor of the journal Educational Philosophy and Theory and founding editor of five international journals. His interests are in philosophy and education and he has written over one hundred books, including The *Global Financial Crisis and the Restructuring of Education* (2015), and *Education, Cognitive Capitalism and Digital Labour* (2011). He has acted as an advisor to governments in the USA, Scotland, NZ, South Africa, UNESCO and the EU. He was made an

Honorary Fellow of the Royal Society of NZ in 2010 and awarded honorary doctorates by the State University of New York (SUNY) in 2012 and University of Aalborg in 2015. He has just published *The Chinese Dream: Educating the Future*. (http://michaeladrianpeters.com/)

Gilberto Pinzón is a maxillofacial surgeon with a Masters Degree in Business Administration from AIU in the USA. He is the Co-founder of Education First Inc in the USA, an organization that operates 6 schools in South Florida and licences its educational program VESS to over 100 schools in America and Europe. International instructor on Parallel Thinking for the DeBono Group USA and Thinking Maps for TM-USA. Speaker and presenter at international conferences on Thinking as a Pedagogical Strategy, Strategic Thinking, Thinking Skills, habits and dispositions. Co-author of several articles and books. Promoter of the Chair of Neuroeducation UB-EDU1ST.

Claudia Prats holds a PhD in Biomedicine from the University of Barcelona (Faculty of Biology). After completing a master's degree in Neurosciences, her thesis was related to genetic factors involved in neurodevelopmental disorders, leading to different publications in journals of first impact. In addition, during her thesis period she was also able to acquire experience of teaching biological anthropology. She is currently finishing a master's degree in teaching education at UPF and is a Post Doc researcher at the Oncology Institute of Catalonia (ICO).

María José Prieto is an honorary senior Professor of Microbiology at the Faculty of Biology (University of Barcelona). She has been a professor at the Faculty of Biology since 1970, mainly in the areas of genetic engineering, general biology and microbiology. She has especially developed her research in microbial and molecular genetics, giving rise to different DNA visualization techniques (electron microscopy and AFM), contributing to and collaborating with numerous investigations and publications in the area of Bioinorganic science. Finally, in 2000, she began studying and teaching the "Evolution of biological scientific thought", the subject that has been her greatest priority in recent years. She is the author of the book "Thinking about the science of biology" (2017). She is currently in the process of editing a book related to the "Approach to life and work of Hildegarda de Bingen from integral science".

René Ramírez is an Economist, with a Ph.D in Sociology specializing in Labor Relations, Social Inequalities and Trade Unionism from the Faculty of Economics, University of Coimbra – Portugal; Master in Economic Development, Institute of Social Studies (ISS), Erasmus University of Rotterdam, Netherlands; and Master in Government and Public Policy from the Latin American Faculty of Social Sciences (FLASCO), Mexico. He worked as Coordinator of the III Regional Conference on Higher Education for Latin America and the Caribbean (IESALC-UNESCO), in the thematic area of "Science, Technology and Innovation" (2018). He was Chairman of the Council of Higher Education, Ecuadorian State (2011-2016), Minister of Higher Education, Science, Technology and Innovation of Ecuador (2011-2017) and Minister of Planning and Development of Ecuador (2008-2011). He was also President pro tempore of the South American Council of Science, Technology and Innovation, Union of South American Nations (UNASUR) (2013-2014). At present, he is a guest professor-researcher at the Autonomous University of Zacatecas (UAZ) and a researcher at the National Autonomous University of Mexico (UNAM), Mexico.

Emanuela Reale is a Research Director, and head of the Rome Unit at the Istituto di Ricerca sulla Crescita Economica Sostenibile del Consiglio Nazionale delle Ricerche (IRCRES CNR). She was a PI on several national and European projects and coordinator of EC tenders on transnational interdisciplinary research and government R&D funding. She was Vice President of the Italian Evaluation Association-AIV, and Vice President of the European Forum for Research and Innovation-EU-SPRI. She is currently a Member of the Board of the Consortium of Higher Education Researchers CHER.

Guillem Roca is a medieval history researcher, and currently a part-time professor at the University of Lleida. His main lines of research are: history of medicine, medieval hospitals, public health measures and poverty control in medieval urban areas. In 2017 he defended his PhD dissertation titled: *Salubritat i salut publica a la Lleida baixmedieval: la gestió dels espais públics, la pobresa i els hospitals* (healthiness and public health in Lleida during the Late Middle Ages: the administration of public areas, poverty and hospitals). His main publications are: (2018) "Medidas municipales contra la peste en la Lleida del siglo XIV e inicios del XV", Dynamis, 38 (1): 15-39; (2018) "La unión de los hospitales ilerdenses: el expediente de 1447", Revista de la CECEL, 18: 31-54; (2016) "El colapso del sistema hospitalario trecentista ilerdense: de camino hacia la construcción del Hospital General de Santa Maria", Revista de la CECEL, 16: 7-36.

Alexis Roig is the CEO of SciTech DiploHub and a Lecturer in Entrepreneurship, Innovation Policies, Business Internationalization, and Cross-cultural Management at the University of Shanghai for Science and Technology. He has 10 years of experience as a senior advisor on science diplomacy to ministries of Foreign Affairs, Science & Education across Asia and Europe. He holds a master's in computer science from the Universitat Politècnica de Catalunya, an MBA in Entrepreneurship from the Ecole de Management de Normandie, and a Postgraduate degree in Diplomacy from the United Nations Institute for Training and Research.

Iza Romanowska received an MA in Prehistoric Archaeology from the Jagiellonian University, Poland before undertaking an Msc and PhD in complex systems simulation at the University of Southampton, UK. Her thesis 'Modelling hominin dispersals with agent-based modelling' focused on evolutionary dynamics between climate change, hominin population dynamics and migration. In 2017 she joined the Barcelona Supercomputing Center to work on the EPNet project that is modelling trade and commerce in Ancient Rome.

Núria Ruiz is a Doctor in Chemistry (URV, 1993), has a Master's Degree in Chinese and Japanese Studies: Contemporary World (Open University of Catalonia, UOC, 2016), a Bachelor's Degree in Chemical Sciences (University of Barcelona, 1989), and a Bachelor's Degree in Audiovisual Communication (UOC, 2006). She is a lecturer of chemistry and has been a member of the Innovation in Catalysis research group at Universitat Rovira i Virgili since 1997 and was Vice-dean of the Faculty of Chemistry between 2006 and 2010. She has been Academic Secretary of the Institute of Education Sciences (URV) since 2010.

Ana Sánchez-Bello is a professor in the Faculty of Education at the University of A Coruña (Spain), head of the Department of Pedagogy and Didactics and a member of the GIE Research Group dedicated to the study of educational innovation. She teaches graduate and undergraduate courses on gender studies, critical discourses and curriculum theory. Her interests focus on the analysis of educational policy, the role of women in science, leadership and several aspects of the critical curriculum. She has also participated in various research projects related to school policies and equity and was responsible for establishing the university's Office of Gender Equality.

Zainal Abidin Sanusi is currently Director of the Sejahtera Centre for Sustainability and Humanity, International Islamic University Malaysia while serving as an Associate Professor at the Department of Political Science. He has served as Council Minister (Education) on the Malaysian High Commission and as Deputy Director of the Centre for Leadership Training at the Higher Education Leadership Academy of the Ministry of Education of Malaysia. He has a Ph.D. in International Studies from Waseda University, M.A. in International Relations from International University, Japan and spent one-year of postdoctoral study at the UN University Institute of Advanced Studies. His area of academic specialization is governance and education for sustainable development and his current research interests are Sustainability Science, Education for Sustainable Development and Public Policy Analysis.

Xavier Serra is a Professor in the Department of Information and Communication Technologies and Director of the Music Technology Group at the Universitat Pompeu Fabra. After a multidisciplinary academic education, he obtained a PhD in Computer Music from Stanford University in 1989 with a dissertation on the spectral processing of musical sounds that is considered a key reference in the field. His research interests cover the computational analysis, description, and synthesis of sound and music signals, with a balance between basic and applied research and approaches from both scientific/technological and humanistic/artistic disciplines. Dr. Serra was awarded an Advanced Grant from the European Research Council to carry out the CompMusic project aimed at promoting multicultural approaches in music information research.

Farrah Sheikh earned her PhD from SOAS, University of London where she worked as a Nohoudh Scholar at the Centre of Islamic Studies. Now working as an HK Research Professor at the Academy of Mobility Humanities (AMH), Farrah's research specializes in issues surrounding Muslim minority life including; identity, exclusion, and integration in Britain and South Korea.

Andrew Simpson is a casual professional staffer at Macquarie University's (Australia) Library, Archives and Collections. He has previously worked as a university museum curator, educator and researcher. He introduced and developed Australia's first undergraduate degree program in Museum Studies followed by named postgraduate degree programs. He has research interests in the history, role and functions of museums in

society, in particular, university museums, museum education, natural history and the public understanding of science. Since ceasing full time employment he undertakes a range of paid and voluntary project work in higher education, museums and heritage. He is currently Vice President of UMAC, the International Council of Museum's (ICOM's) International Committee for University Museums and Collections, and editor of the UMAC Journal.

Zacharoula Smyrnaiou is an Assistant Professor of Science Education. In the last 10 years, her work has focused a) on the teaching of science using new information technologies b) on the educational design of digital media and accompanying pedagogical scenarios c) on implementing research in real classroom settings considering different factors and d) on supporting teachers and students during the implementation of innovative art-based or work-based educational activities with digital media. She is a member of the Science Curriculum Reform Committee in Greece and chairwoman of the Scientific Supervisory Board at the 1st Experimental High School of Athens. She has been involved in projects funded by the E.U. (CREATIONS H2020-SEAC-2014-1 CSA, DESCI Erasmus +, PLAY4GUIDANCE-Erasmus +, FP7-Metafora, etc).

Piotr Stankiewicz is a PhD – sociologist, assistant professor at Nicolaus Copernicus University in Torun (Poland) and director of Educational Research Institute in Warsaw. Coordinator of the educational project TEACHENER: Integrating Social Sciences and Humanities into Teaching about Energy. The project aims to fill the gap between social sciences and humanities and energy teaching at universities in Europe, by transposing social sciences and humanities knowledge to the domain of higher technical education. The project is conducted by a partnership of seven SSH and technical higher education institutions from Poland, Spain, Germany and the Czech Republic and financed within the Erasmus+ scheme.

Lee Sternberger is Associate Provost in Academic Affairs and Executive Director of the Office of International Programs (OIP). She leads a campus-wide effort to internationalize university curricula, services and programs, and coordinates global and international activities across JMU's seven colleges. Dr. Sternberger earned her B.A. in Economics from the University of Missouri (Columbia), her M.S. and Ph.D. in Clinical Psychology from Washington State University, and an M.A. in Architectural History from the University of Virginia; she has also completed post-graduate work at the Courtauld Institute of Art in London. Dr. Sternberger's interests are cross-disciplinary and international in nature.

Rajesh Tandon is a doctor and internationally acclaimed leader and practitioner of participatory research and development. He founded the Society for Participatory Research in Asia (PRIA), a voluntary organization providing support to grassroots initiatives in South Asia, and has continued to be its chief officer since 1982. In 2012, he was appointed co-chair of the UNESCO Chair on Community Based Research and Social Responsibility in Higher Education, which is an outcome of and supports UNESCO's global mission to play 'a key role in assisting countries to build knowledge societies'. Tandon has authored more than 100 articles, a dozen books and numerous training manuals on democratic governance, civic engagement, civil society, governance and management of NGOs, participatory research and people-centred development.

Susanna Tesconi is a lecturer at the Universitat Oberta de Catalunya and a member of the DARTS interdisciplinary research group on design, art, technology and society. With a bachelor's degree in Philosophy from the University of Pisa, PhD in Education from the Universitat Autònoma de Barcelona, she is a learning environments designer. Her work is inspired by the interaction between learning processes and technology with the aim of accompanying people in the development of their own devices, tools and environments. The practice of designing learning environments is integrated into her research focus on the potential of digital making as a tool for teacher training.

Sandra Torlucci is Vice-Chancellor of the National Arts University (UNA), where she has also served as Dean of the Dramatic Arts Department. Prior to this, she worked as Academic Secretary of the Master's Degree on Cultural Management (FFyL- UBA). She currently presides over the Commission on Institutional Relations of the National Inter-University Council and formed part of the CRES 2018 Organizing Committee. She works as a lecturer and researcher in the field of Semiotics and the Theory of Drama and Audiovisual Arts, activities she carries out at UNA, Buenos Aires University and the Cinema University, among other institutions. She is the director of research projects associated with performing arts and body configurations on stage, having produced a large number of essays and articles. She is also a scriptwriter, playwright and theatre director.

Carme Torras is a Research Professor at the Spanish Scientific Research Council (CSIC), and Head of the Perception and Manipulation group at the Robotics Institute in Barcelona. She received M.Sc. degrees in Mathematics and Computer Science from the University of Barcelona and the University of Massachusetts - Amherst, respectively, and a Ph.D. degree in Computer Science from the Polytechnic University of Catalonia (UPC). Prof. Torras has published five books and about three hundred papers in the areas of robot kinematics, computer vision, geometric reasoning, machine learning and manipulation planning. She has supervised 18 PhD theses and led 16 European projects, the latest being the Chist-Era project I-DRESS, the H2020 project IMAGINE, and her ERC Advanced Grant project CLOTHILDE – Cloth manipulation learning from demonstrations. She is a EurAI Fellow (2007), member of Academia Europaea (2010), and member of the Royal Academy of Sciences and Arts of Barcelona (2013). She has received the Dissemination Award from the Barcelona Science Museum, and the Narcís Monturiol Medal from the Government of Catalonia. Carme Torras is also a fiction writer and has published four novels in Catalan, for which she has been awarded several literary distinctions. Convinced that science fiction can help promote ethics in robotics and new technologies, one of her novels - winner of the Pedrolo and Ictineu awards - has been translated into English with the title "The Vestigial Heart" (MIT Press, 2018) and published together with online materials to teach a course on Ethics in Social Robotics and AI. Further information at http://www.iri.upc.edu/people/torras

Olga Torres-Hostench (BA and PhD in Translation Studies) is a tenured lecturer at the Department of Translation, Interpreting and East Asian Studies at the Universitat Autònoma de Barcelona. She teaches on undergraduate, graduate, continuing education and online courses on multimedia translation and localization and English/Spanish/Catalan translation in the legal, technical, scientific and audiovisual fields. She is a member of the Tradumàtica Research Group, and her current research interests are focused on translation and technologies, machine translation postediting, and employability. She has contributed to several funded research projects such as LeViS: Learning via Subtitling; CLipFair (Learning via revoicing or captioning); EGPS (European Graduate Placement Scheme); TRACE (Assisted Translation, Quality and Evaluation); LAW10n Project on the translation of software licensing agreements; and the current ProjecTA and ProjecTA-U projects on Machine Translation and Users of Machine Translation. She has published her research in impact journals and books.

Crystal Tremblay is a social geographer and community-based scholar with interests in the areas of environmental sustainability, participatory resource governance and critical pedagogy. She specializes in using participatory video and arts-based methods for creative citizen engagement and the co-creation of knowledge leading to environmental and social equity. In her capacity as Special Advisor on Community Engaged Scholarship, she provides leadership and research in support of UVic's community engagement portfolio. She has published widely on topics related to university community research partnerships, training in community-based research, social innovation and participatory policy in water and waste governance.

Judith Urbano received a PhD in Art History from the University of Barcelona with a dissertation on the life and work of the architect August Font Carreras (1845-1924). She has been the Dean of the Faculty of Humanities at the Universitat Internacional de Catalunya (UIC Barcelona) since 2016 and Director of the Research Group on History, Architecture and Design since 2013. Her expertise is in the fields of 19th Century Architecture (Historicism, Eclecticism and Art Nouveau), Catalan "Modernisme", Avant-garde Movements and Women Artists. She has been curator of several exhibitions: Gaudí in Paris 1910 (2001), La Mansana de la Discòrdia (2015), La Casa Gralla (2016) and editor of its catalogues. She has written several books, chapters and articles on art history and architecture of the nineteenth and early twentieth centuries.

Andrea Vargiu is a Sociology professor at the University of Sassari (Italy) and President of the MA Course in Social work and Social policies. He coordinates the FOIST Laboratory for Social Policies and Learning Processes. He has a solid record in action research and Community Based Research. His research interests mainly concern the role of universities and public engagement in research, evaluation and social accountability, organised solidarity and social policies, and the methodology of social sciences. He is a founding member of IntHum – Intercultural Laboratory for Research and Promotion of Human Condition: a permanent partnership instrument between academia and civil society.

F. Xavier Vila is Head of the Department of Catalan Philology and General Linguistics and director of the Sociolinguistics and Communication Research Centre (CUSC) at the Universitat de Barcelona. Specialised in sociolinguistics

and language policy, with a particular attention to the Catalan language area, he has directed numerous projects and worked as advisor for several institutions. Some of his recent publications are Linguistic models in higher education in Catalonia: *Origins, rationale, achievements and challenges* (2018); *Language Policy in Higher Education. The Case of Medium-Sized Language Communities* (2015); and *Survival and Development of Language Communities: Prospects and Challenges* (2013).

Josep M. Vilalta is Director of the Global University Network for Innovation (GUNi) and Executive Secretary of the Catalan Association of Public Universities (ACUP). Specialist in public management and public policies and in higher education and research management, he holds an experience of thirty years on different leading positions on public sector organizations as well as on different higher education institutions. He has promoted and participated in various projects and groups of experts of the Government of Catalonia and the Government of Spain, the European Commission, the OECD, UNESCO, and several countries in education and universities, political science and public policy management. He has published nearly a hundred papers for journals and publications, book chapters and books on public administration, public policy, education, universities and scientific research policy. He is member of the group of experts of the Spanish university policy think tank Studia XXI, member of the Advisory Boards of Fundació iSocial and 'El Diari de l'Educació'. He is a regular contributor to different national and international publications and to the newspapers ARA, NacióDigital and La Vanguardia. He holds a Degree in Geography and History (UB), a Master in Public Management (UAB), a Master in Political and Social Theory (UPF) and a Postgraduate in Management of Higher Education (Open University/Universiteit Twente). He has been promoter and director of the Master of Management and University Policy at UPC and visiting professor in different institutions.

Jaume-Elies Vilaseca is a graduate in Fine Arts from the University of Barcelona. He is an Assistant Professor at several universities, a researcher at the University of Barcelona and a professional in the field of Communication and Audiovisual Media, focused on Image Post-production. He has participated in the visual effects of more than 50 films and has won several national and international awards, among them one Gaudí award (2013), four Goya awards (2009, 2004, 2002 and 2000), one Manfred Salzgeber award at the Berlinale (2000) and one Festival de Cinema Internacional de Sitges (2000).

Richard Watermeyer is a sociologist of higher education policy, practice and pedagogy. His new book, 'Competitive Accountability in Academic Life' (Cheltenham: Edward Elgar) considers the deleterious effects of systematic manipulation of research governance technologies by academics and their institutions. He argues that competitive accountability produces performance based anxieties that are corruptive to the self-concept of academics as public intellectuals and which in turn engender counterfeit rationalisations of the public value of academic research. Richard is a Reader and Director of Research within the Department of Education at the University of Bath, UK.

Peter J. Wells is Chief of the Section for Higher Education at the UNESCO Headquarters in Paris, which is responsible for the overall coordination of the UNITWIN/UNESCO Chairs program. The Section's other activities include: promoting quality enhancement and assurance mechanisms for higher education institutions (HEIs) and systems; the internationalization of higher education programs through the mobility of students and researchers facilitated by the five UNESCO Regional Recognitions of HE Qualifications; and the widening of access to quality HE and increasing of lifelong learning opportunities at HEIs through systematic approaches to ICT enabled learning (including open and distance learning, the promotion of MOOCs and Open Education resources). Before taking on his role as Chief of Section at UNESCO, Wells was Director of Bucharest College (BPTC), Higher Education Programme Specialist at UNESCO, Academic supervisor at Higher Colleges of Technology, Lecturer at the Polish Open University, Special Education Consultant at the Council on Foreign Relations and Political Risk Analyst at Euler Hermes. Wells holds a BA in European Studies from the University of Leicester, an MSc in International Relations and Affairs from Florida State University and is a Doctor of Philosophy in Quality Enhancement in Tertiary Education from Lucian Blaga University of Sibiu.

Sarah Marie Wiebe is an Assistant Professor in the Department of Political Science at the University of Hawai'i, Mānoa with a scholarly focus on environmental sustainability and de-colonial, sustainable futures. She has published in journals including Citizenship Studies and Studies in Social Justice. Her book *Everyday Exposure: Indigenous Mobilization and Environmental Justice in Canada's Chemical Valley* (2016), published by UBC Press, won the Charles Taylor Book Award (2017) and examins policy responses to the impact of pollution on

the Aamjiwnaang First Nation's environmental health. Alongside Dr. Jennifer Lawrence (Virginia Tech), she is the Co-Editor of Biopolitical Disaster. Her teaching and research interests emphasize political ecology, participatory policy making and deliberative dialogue. As a collaborative researcher and filmmaker, she worked with indigenous communities on sustainability-themed films including "Indian Givers" and "To Fish as Formerly".

Katie Wilson is a Research Fellow in the Centre for Culture and Technology at Curtin University, Australia. Her research focuses on scholarly communication, open knowledge institutions, inclusion and diversity in universities and indigenous education.

Madhura Yadav is a Professor, Head & Director of the School of Architecture and Design at Manipal University, Jaipur. She is a Member of the Board of Studies in Architecture, Planning and Fashion Design. Her areas of interest are Sustainable Architecture and Urban Planning. Dr. Yadav has expertise in Sustainability in Cities and Buildings and has researched the Architecture-Ecology interface. She is a Life Member of the Council of Architecture, India.

Anastasia Zabaniotou is a Professor at the Chemical Engineering Department of the Faculty of Engineering, Aristotle University of Thessaloniki, Greece. She holds a Ph.D. and DEA from Ecole Centrale de Paris. She has worked for the European Commission in R&D policy and continues to contribute as expert. She is a board member of RMEI (Network of Mediterranean Engineering Schools). Her research activities are in the fields of Energy and Environment, Circular Economy and Sustainability. She is interested in multidisciplinary research. She is involved in activities concerning science and society, international Engineering Education, Mobility and SDGs. She is a founder member of the Aristotle University Center for Space, Environment, Technology, and Gender Equality. She is the coordinator within RMEI of the HORIZON2020 TARGET project 'TAking a Reflexive approach to Gender Equality for institutional Transformation' and leader of the RMEI Gender Equality working group.

A Regional Approach
The Latin American University: Science and Technology Seen from the Humanities – Emer(conver)ging Issues

Axel Didriksson (Coord.), Freddy Álvarez, Carmen Caamaño, Célia Caregnato, Damián Del Valle, Alicia Hernández, Daniela Perrotta, Sandra Torlucci

Abstract

The system of university disciplines and the fragmentation of its profession–oriented academic results and processes have meant that the management of new knowledge, the synergy between the humanities, science and technology, the interdisciplinary organization of the curriculum, governance structures and the representation of its main actors and communities have not been the prevailing trend. The dominant form of university is still that with a strong identity and historic roots that is closely tied to the student protests and historical contexts of the different countries, especially the legacy of the 1918 Student Reform Movement, which arose at the University of Córdoba, Argentina, and spread to most universities across the region. This mood still prevails today and the affinity remains strong. This paper not only emphasizes the historical and current context of reference, but also presents a set of emerging/converging concepts that are under debate in the Latin American and Caribbean region, with major changes in the way that science and technology are seen from the perspective of humanities, in terms of new paradigmatic, epistemic and intercultural platforms and prefigurations that have arisen at a significant number of Latin American universities.

Introduction

The university system in Latin America and the Caribbean has a Napoleonic profession-oriented tradition, and its organizational and academic structure is strongly rooted in schools and faculties, divided into tight and rigid fields of knowledge, with its research centers and institutes physically and academically separated from one other. This same scenario has been reproduced and remains predominant at most of the public universities in the region, despite all the advances that have been made in recent decades, as shown in this paper.

In June 2018, UNESCO held its Regional Conference on Higher Education in the framework of the centenary of the reform movement, which across the region had promoted and established university autonomy, co-governance (parity in the representation of students, lecturers and authorities on collegiate bodies), the right to receive a subsidy from the state, and a critical position of the university towards society, the economy and political powers. The legacy of this reform is a model that is deep-rooted in the region, but which continues to be a matter of debate and study and the cause of movements that support, resent or criticize, because of what it represents as one of the core principles on which public Latin American and Caribbean universities are based, in close relation to a pattern of scientific-technological dependence and subordination to different world powers.

Hence the final declaration of this multitudinous event (with more than 12,000 participants) reflects the conviction of the need to advance with the transformation of the region's university and higher education systems, based on a vision of science and technology from the point of view of the humanities, inter-cultural matters, inclusion and equity.

In the last two decades, knowledge management and the organization of university teaching and research have been focusing on the construction of academic spaces that operate and integrate in converging and emerging networks, associations and work teams, in order for these interdisciplinary conglomerates to be in direct correspondence with policies and programs for social inclusion, equity, and inter-cultural and regional integration, based on the identification of universities with the principles of public good, and universal human rights. It should therefore be understood that the transformation of university structures and the critical positioning of its regional tendencies are not, and should not be, an obstacle to achieving new platforms of articulation, integration, innovation, territorially and socially responsible research and reforms of the current academic systems.

This tendency to rearrange academic spaces based on social commitment and inter-culturality, and particularly the defense of the human and social sciences, without ignoring their articulation with formal and natural sciences and technology (see attached appendix), is growing, but at the local and regional levels, especially with the innovation of new branches and with additional sites being built in the most developed universities, and with the new networks and associations that have been promoted in recent years, and the new national universities that have been created in different countries in the last two decades.

According to the experience of universities in the region, this academic and organizational innovation has been encouraged in a much more coordinated manner, with the organization of research centers working in fields such as nanotechnology, genomics, biosciences, microelectronics, biotechnology, sustainability and the environment, connecting the social sciences with formal sciences, from the perspective of complexity (see Case Study), to mention just a few, as well as with others that focus on the convergence of the humanities and the arts with inter-culturality, social sciences, governance and education. There have been many recent examples of knowledge production that have successfully created systems of convergence among disciplines, in all fields of knowledge.

The most active and dynamic academic groups and networks in the region are becoming more and more aware of the fact that disciplinary lines of work are no longer sufficient or relevant by themselves to tackle contemporary phenomena and the complexity of modern-day issues that require more coordinated efforts of epistemological transgression to attain converging and socially responsible academic management. This should be viewed as a tendency that needs to be developed as soon as possible, encompassing a greater quantity and quality of processes, especially high-level learning and research-innovation processes, as well as those associated with the work of new regional or international networks.

Winds of Change in Higher Education

In Latin America and the Caribbean, poverty affects 200 million people, of whom 88 million live in extreme poverty, and representing more than 25% of the total population. The last two decades of the last century witnessed a series of economic crises throughout the region, leading them to be dubbed 'the lost decades'[1], followed by other crises, such as the one of 2009. Also, on a political level, some democratic regimes have collapsed, leading to right-wing and neo-fascist governments, which have only worsened the desperate plight of millions of human beings, mostly children and young adults.

Despite an increase in gross enrollment rates in the Latin American and Caribbean higher education system, the universalization of the tertiary level continues to be a typical phenomenon of the most developed countries, where the number of university students accounts for 60% to 70% of the corresponding age group, whereas in Latin America it accounts for between 25% and 40%, with some notable exceptions, such as Cuba. Enrollment rates at the post-graduate level show even lower indicators, and are highly concentrated in five countries.

1. "Indeed, after the failure of the IMF and World Bank's Structural Adjustment Programs implemented in the region in the 1980s, the 1990s witnessed a certain economic upturn that did not however succeed in reverting the upward trend in absolute poverty rates, whereas relative poverty rates fell by 5 points in the 1990-1997 period, representing 43% of the population by the end of this period. At the same time, Latin America is still the most unequal region in the world, with the highest quintile's share of income vastly exceeding that of the lowest quintile by 10 to 16 times". See: Bonal, Xavier. "Educacion y pobreza en America Latina: reflexiones y orientaciones para nuevas agendas politicas". In: Bonal, Xavier (Editor). Globalizacion, Educacion y Pobreza en America Latina. Fundacion CIDOB, Barcelona, 2006, p. 11.

This has a negative impact on the possibilities for social mobility, job promotion, and job placement rates of graduates from secondary, upper secondary and higher education, on account of the socio-economic disparities that are reproduced in the education system[2].

At present, the increase in the number of school age children has introduced the question of universalization and free access to education as key items on the new equity agenda for higher education systems, viewed as a step towards growth in incorporation of the corresponding age group in the contemporary processes of knowledge production and transfer, significant learning, and multiple, coordinated, relevant, significant and socially meaningful knowledge development.

According to the UNESCO Science Report: towards 2030 (2015), the break-down of enrollment by field of knowledge in Latin America is as follows: 55.8% in social and administrative sciences; 5.6% in science; 14.0% in engineering and technology; 5.6% in agriculture; 6.45% in humanities[3].

When comparisons are made, the general panorama regarding knowledge advancement is highly unequal, as it is highly concentrated in a few countries and is not at all dynamic, due to the aforesaid factors and also the brain drain (there are more Latin American postgraduate students in US or European universities (122,806) than in the region (33,546) (p.182), low investment rates in higher education (1% or less, on average) and a concentration of doctoral studies in three particular countries: Brazil, Argentina, and Mexico. The largest investment in R&D is made by the state (60.8%) and only involves a handful of universities and researchers (p.195), most of them also

concentrated in these three countries (138,653 in Brazil; 51,685 in Argentina, and 43,592 in Mexico (p. 184).

However, both the reduction in public resources and the privatization of education services (mostly only available to a small and specific population segment in accordance with their payment capabilities) have undermined the capacity of many countries to expand their education services in order to adapt to growing demands, especially in the state-run system, a situation observed even in most of the largest and most developed countries of the region. In addition to this, we must also mention the unequal conditions with regard to continuous and successful education trajectories, which are hampered by large wage and salary gaps, belonging to certain ethnic groups, gender and language issues, physical disabilities and other geographical and suburban determinants.

Debate on the Synergy between the Humanities, Science and Technology: Emerging/Converging Issues

In the following sections, the authors have selected a series of focuses, methodological and conceptual approaches and university practices and alternatives that are being developed to achieve the goal proposed for the region: to transform universities on the basis of their historical foundations and their status as a shared and social resource.

As shown, the aim of this collaborative approach is to present the way the current trend towards inequality and exclusion on a university level can be shifted towards initiatives that seek to democratize knowledge, leading to alternative efforts to build synergy between science and technology from the perspective of the social sciences, arts, culture and the humanities.

1. Social Inclusion Policies

Its history and a tendency to question the regional reality have made the Latin American university model unique. Based on political and critical reflections on education and society, its universities challenge their unequal and non-democratic societies, while advocating from within their own organizations for academic and research freedom, as well as co-governance, as a

2. According to a study by the OECD (2015), the educational level of workers vis-a-vis their actual job is the lowest among its member countries, with a fall in their rate of return in recent years. This is reflected in the gap between the skills taught in the education system and the requirements of sectors of the job market (p. 21). More than half of the people classified as belonging to the 'middle class' are in the informal sector (p. 22), hence their salaries are lower than those earned by workers in the formal sector, despite having the same level of education (Idem). See OECD/CAF/UN ECLAC. (2015). Latin American Economic Outlook 2015: Education, Skills and Innovation for Development. Paris: OECD Publishing.
3. Unesco Science Report (2015). UNESCO, Paris, p. 182. "Six out of ten graduates at the bachelor level specialize in social science, compared to only about one in seven for engineering and technology. This trend contrasts starkly with that in emerging economies such as China, Korea and Singapore, where the vast majority of graduates study engineering and technology. The region has never recovered from the disaffection for the latter fields witnessed at the turn of the century" (p. 181).

vehicle to encourage real participation among their subjects (Leite 2018; Didriksson 2018). This brings together extracurricular, research and teaching activities with a commitment to social responsibility and integration.

A primary condition for any university to engage in social and cognitive transformation is to be committed to wholesale transformation of their own structures. In order to devise forms of social, political and cultural change that are dynamically and critically coordinated with the creation of better conditions for the development and behavior of young people in society, collaboration between universities and schools needs to be intensified in order to offer more qualified training and greater opportunities in the schooling of the young.

It is therefore a case of examining the processes with the intention of reverting any excluding mechanisms involved in the academic methods of the region, which concerns not only access to university but also the permanence of students on any given program, as there are high drop-out, absenteeism and late graduation rates. Governance needs to re-focus on building more democratic participation processes for the under-represented or excluded from the education and meaningful learning systems.

The approach presented herein not only focuses on the use of inclusion mechanisms, but also discusses the possibility of tacking the kinds of educational and social exclusion that have traditionally been produced and sustained in Latin American society.

It must be understood that the policy of 'affirmative action', as adopted in several countries in recent years, is a fundamental resource in order for certain social segments to gain access to higher education, in such a way that it facilitates dialogue with the students that constitute the new generations, most of all the sons and daughters of non-schooled parents, who could then contribute to the production of knowledge outside of traditional university settings. This is based on the understanding that students with new profiles, biographies and social backgrounds are active agents in problematizing and proposing when it comes to discussion and improvement of the public nature of higher education institutions. Their agency is directly associated with movements, causes, or even work and everyday dynamics in general. These aspects of affirmative action policies are directly related with actions that seek to enhance social insertion at university.

The sense of belonging associates the validity or relevance of higher education with social practice. This goes beyond mere insertion in the labor system, and also includes cultural democratization as well as the ability to respond to long-term social and human development needs. This sense of belonging also refers to the capacity for proposing solutions for local, regional, and global problems. As shown in the above data, the search for solutions to social problems through higher education lies in the assumption of responsibilities to fight against inequality. Among the alternatives that have emerged in the last decade, in the sense of making higher education more relevant, we can cite the commitments to strengthening basic education schools and enabling access to higher education in state-run and free-of-charge institutions, at both undergraduate and postgraduate levels, especially in the case of disadvantaged social groups.

The fact that 'affirmative inclusion policies' exist does not mean that they have been assimilated in university contexts: some institutions or specific programs have taken the initiative to implement affirmative actions that need to be organized in the short, medium and long terms in order to become truly effective, as these policies for broader access at the institutional and national levels need to be expanded.

In addition to this, affirmative actions need to be viewed as a whole; this means that they should not be restricted to merely establishing university quotas for excluded sectors. Programs should not only design mechanisms to ensure that these groups of people enroll for university courses, but it is also indispensable for permanence policies to be formulated. There is a need to fight the subtle mechanisms that limit the possibilities for students to make progress with their work and be recognized as subjects in full exercise of their rights within the institutional framework.

When developed for other social groups, affirmative policies should also be accompanied by new study and research horizons. From the moment these social groups gain access to university, topics, theories and problems related to their realities, their know-how and their experiences become valued. Therefore, education for diversity and against discrimination gains strength when curricular changes, especially to degree or undergraduate courses, are encouraged. From that moment on, society will start to find itself again and appreciate how central an issue

inequality is, and the extent to which public policy needs to be reoriented accordingly.

2. Art and Culture: Essential Components

For ten years, we have been witnessing major movements in terms of art and artistic production in the academic field, a movement that has been extended to the regional and international arena and which has had an impact on the university system.

Based on this concept, the question that needs to be asked and addressed as a problem is whether we can view artistic production as a form of knowledge production and research. And, even more so, to what extent can we view art as a form of research that transforms the notion of art and science, or, perhaps, in what sense has this already been thought, acted upon, represented, and institutionalized as knowledge reflecting an immanent process in both art and science? [4] What kind of knowledge is it? How does it relate to the new production conditions that prevail in contemporary life within the framework of the so-called knowledge economies or cognitive capitalism?

The use of the term 'artistic research' and not research on the arts, leads us to consider the socio-political and economic conditions that have made this reconfiguration of mutually exclusive semantic fields possible, but it also warns us of the ideological assumptions that the new articulations between art, science and technology entail in the context of current socio-economic configurations.

Thus, research on the arts has thus become a field of opportunity for exploring comparative analyses and alternative research models capable of updating intersections between perception, affection and ideas. It is an expanding, wandering and erratic territory since it comes from very diverse perspectives and disciplines, and, precisely for this reason, it may blur the boundaries between solid and institutionalized fields of study.

We can broadly identify two positions that are currently under debate in the region: on the one hand, criticism of increasing control over knowledge production (in terms of accreditation mechanisms and standards) that imposes

4. At the dawn of modernity and with the founding of modern science, art and science were set apart. Art became the reserve of direct, immediately sensitive experiences that are not mediated by reason. Thus, experience and certainty became incompatible, mutually exclusive fields; experience, now within the realm of art, was definitively dismissed from the field of scientific knowledge and (because of the ideological operation that matches the universal with the particular) from the field of knowledge in general as well.

its own methodologies and evaluation criteria of artistic research to the detriment of its critical potential and, on the other hand, a conception that identifies the emerging forms of modern-day art as performativity, intangibility and creativity and places them at the epicenter of the socio-economic transformations of the knowledge society. In both cases, the role of education and art institutions must be examined in the light of the impact that artistic production has on the knowledge economy.

The former position describes the fundamental role that academic institutions play in the ever-growing knowledge commercialization process: a shift from the concept of value as objectification of material work to the idea of innovation and knowledge as intangible 'raw materials' to generate value in the new era of capitalism. Artistic production, traditionally on the margins of academic institutions and at the antipodes of the scientific model, would continue to be the domain of freedom and resistance. Its inclusion in the dynamics of institutional research models would cause, claims this view, a depletion of the creative powers of art: its power to transgress and displace the norm.

In our view, the latter position considers the problem in a more complex and dialectical manner. In principle, it involves considering the way that art (the aesthetic regimes that validate it and the practices in which it is deployed) connects with economic and social processes. It questions the discourse that (claiming to be the guardian of the supposedly critical purity of the work of art) merely validates the ideological model that heightens its uselessness and social marginality. It postulates the interweaving of art and its material conditions of existence since, as pointed out by W. Benjamin: "there has never been a document of culture, which is not simultaneously a document of barbarism".

All these issues are floating on the horizon of our professional practice as teachers, researchers and stakeholders in the area of university management; they guide us and represent new challenges when it comes to design strategies and implementing projects related to artistic education.

We believe there is a need to examine the difficulties arising when formalizing higher education processes in the various artistic disciplines, incorporating criteria of technical quality, evaluation and research, with the specificity that these processes are explicitly assumed as a form of resistance to the models and standards employed as means for accreditation and professionalization at

universities, and which tend towards homogenization and internationalization, thus subordinating them to the dominant models of knowledge production. As stated at the CRES-2008, held in the city of Cartagena de Indias, Colombia: "The movement from that which is national or regional toward that which is the global (global public good) has as a consequence the strengthening of existing hegemonies."

Thus, artistic education and research at the higher education level must generate strategies to resist the advance of a university project subjected to the demands of the World Trade Organization (WTO). Confirming autonomy as "a right and a necessary condition for unfettered academic (and artistic) work" involves understanding that autonomy is a condition for the critical involvement of knowledge with the social and cultural contexts to which it belongs.

For this reason, we believe it is essential to enumerate the objectives and principles presented in the *Buenos Aires Declaration*[5], resulting from the *Regional Colloquium on the Cartagena Declaration and Contributions for the Regional Conference on Higher Education 2018*, which was held at the Universidad Nacional de las Artes in November 2017, regarding "the recognition of the strategic role of art and culture in producing socially committed knowledge and fighting for cultural sovereignty, sustainable development and the pluri-cultural integration of regions. (For this purpose) it is vital to promote specific legitimation and evaluation matrices for the teaching and learning of and research into the arts at the higher education level".

As pointed out at the beginning, the long-awaited hierarchical organization of artistic education at the university level has managed to fill a recognized gap, but, at the same time, has served to highlight the still marginal and secondary position that has traditionally been assigned to research into the arts.

"It is vital to shorten the distances separating the scientific, technical, humanistic, social and artistic fields, while understanding the complexity and multi-dimensional nature of problems and promoting cross-cutting views, interdisciplinary work, and comprehensive training"[6]. There is still much more to be done in this direction.

We had, and still have, two choices: either we try to get education and artistic research to fit the established criteria for higher education in general or we make the University Schools of Art in the region the places to develop concrete dynamics and processes, links and practices that reformulate both the stereotyped methods of the university system and the conventional production of art. An in-depth study that recognizes the tradition of concrete practices associated with the training of artists in different areas and, at the same time, the heterogeneous processes and competences encompassed by the term 'art' will be fundamental for enriching the debate on the role that artistic research should play in the region.

In this sense, artistic education is a complex area, and that is precisely where its interest lies; it is more of a contradictory relationship, a disjunctive synthesis, than an easily definable homogeneous field. It is that which resists all definition. Art is a practice whereby artists explore the possibility of composing a notion made up of sensations that cannot be repeated. It opposes the mere reproduction of knowledge as imposed by present day accreditation and standardization methods. Art means resistance, as it opens up the horizon of whatever is possible and puts other modes of existence to the test[7].

To claim that there is an alternative concept of art implies doing away with the old dichotomy between reflective and logical knowledge and practical and technical knowledge; between objective, intelligible knowledge that can be systematized and evaluated, and the subjective mystery of sensitive and emotional knowledge. It also implies recognizing the extent to which we are indebted to the mindset that reduces artistic creation to the private sphere, to individual aptitudes and to one's subjective expression.

It is essential for artists to be incorporated into research teams, since they are the producers of a form of knowledge that neither scientists nor technologists can produce, i.e. the production of affects and percepts (Deleuze 1983), and the creative aspect of discovery in the production of knowledge, without which there can be no innovation.

Finally, there is a need to recognize the right to art in education, and not only in the case of higher education. As art is part of the production of knowledge, there can be

---

5. Buenos Aires Declaration (in Spanish and Portuguese) available at: https://www.priu.com.ar/coloquio-cres-declaracion-final
6. CRES 2008 Final Declaration. Scientific, humanistic and artistic education and comprehensive sustainable development. Item 7.

7. See Deleuze and Guattari (1993).

no school without art. To meet the objective of a possible world that is developed, sustainable and better to live in, artistic education is fundamental as it builds citizenship while avoiding discrimination and oppression.

Artistic creation is never an individual affair. It is, above all, a social and cultural matter. Any artistic creation is always a shared creation. It is about learning to think as a community, it is the thoughts that arise on the boundaries, in that blurred area in which the affirmation of difference permits the recognition of the other as one's peer. Maybe it is that utopic dimension that we must learn to teach.

3. Interculturalism: Dialectics of a Concept

In Latin America, universities must include the concept of interculturalism in every working realm. Some of the most important subjects for this cross-cutting and epistemological inclusion arise here, and represent a challenge and a transgression in the face of a hegemonic thought system, but which emerge from the reality in which the current university system lives and is organized.

The concept of interculturalism refers to respectful, horizontal and synergic interaction between cultures. It is different to an imposed, violent and colonizing relationship. It is a concept with a political dimension that is not reduced to politics. It affirms the existence of a plurality of cultures within society, where no group is above another, and there is no reason for one culture to consider itself superior to another. The relationship between different cultures is based on equality and tends towards integration within a given territory.

There are two levels within interculturality. The first refers to recognition and respect for other people's cultures; and the second implies the use of dialogue, although this process is not exempt from conflict, as it questions some of concepts from modern politics, such as the notion of a nation state. In consequence, a process is established in which interculturality modifies the traditional meaning of social struggles. Thus the plight of women cannot only be tackled from the Marxist episteme, nor solely from that of a modern philosophy that carries with it the affirmation of nationalism. The plight of indigenous people seeks reformulation of the State, and appropriation of the territory's resources.

Each of the former aspects implies a conflict with one's equals, while at the same time creating new understandings of interculturality. One thing is to be a man among an indigenous culture, and another is to be in a mestizo culture. Something else is to be a gay man in a Muslim world, or another in an atheist world, or to be gay and rich or gay and poor. And all this is experienced in different ways depending on whether you are male or female, or a child, an adult or elderly.

The interculturality that originated in the South is different to the multiculturalism and pluralism of Northern origin, since it not only seeks recognition from other cultures, or to stress tolerance as the main political conquest, but is necessarily centered on the construction of equalitarian policies. Multiculturalism acquires meaning in cultures that are ancestrally racist; interculturality is generated in places that have condemned thousands of cultures to marginality, even for racist reasons.

The political concretion of interculturalism is subject to several variables: affirmation of diversity, protection and strengthening of languages, new forms of political organization, legitimization of their territories, insertion of their legal systems, acceptance of their native economic systems, other forms of education, and recognition of their health practices.

A primary discourse of interculturality in Latin America and the Caribbean seeks the peaceful coexistence of cultures through the recognition of cultural diversity. Interculturality is the peaceful relationship between two or more cultures. In order to reach such a level, there is a need to overcome prejudices between superior and inferior cultures, those which are sustained on the basis of racist and unfair policies. The 'Us' is confronted in its sociology of superiority.

Interculturality appears within a dynamic, sustained and permanent process of interrelation. Power relations are not mentioned, and the affirmation of equality is not so clear. This kind of interculturality is connected to conscience, and the need for participatory processes, which are distinguished from personal efforts, is stressed. The collective effort that is required for interculturality to happen condemns, in a certain way, individual work. Collectivism, it is supposed, does not occur through individual and individualizing action. Actions coming from the individual tend to be viewed as harmful.

The notion of being uncultured does not exist in this discourse; what does exist is cultural multiplicity. Everyone is born inside a culture, and culture is a reference for identity and communication. The intercultural human being is born inside cultures, is social in its being and is related with the other and the others from before birth.

Cultures are built over time through the establishment of fair, equitable and intercultural relationships. In consequence, cultures are destroyed through colonial, violent, authoritarian and imposed relations.

Such discourse presupposes open cultures. Interculturality is not an option; it is an indispensable path towards good living and self-education. It is the way in which cultures change and are modified beyond will and the expected.

There are endogenous changes to different cultures, but most changes are produced from the outside, due to exogenous factors. One culture does not tend to change on its own; it changes due to other aspects that are external to that culture. So, interculturality is usually present throughout the process of interculturality. There is no single process of dialogue, for dialogue can involve manipulation and imposition of the strong over the weak, a situation that is not seen in such discourses.

Concerns about globalization tend to be the setting of such discourse. Globalization is identified with the phenomena of homogeneity that would destroy Southern cultures, so interculturality challenges globalization. Faced by the spread of one single culture, the answer is to endorse cultural multiplicity. Two questions arise: To what extent is globalization the imposition of not one, but of multiple cultures marked by market standards? And is cultural multiplicity antagonistic or does it support the imposition of a single cultural truth?

The idealization of culture tends to contain a vision of enclosed, complete and pure culture. However, every culture is basically multicultural, i.e. it has been formed and continues to be formed from contacts between different communities and cultures, either in a violent or voluntary way, consciously or unconsciously. Therefore, there is no pure culture. In each one we find traces of other cultures, we do not know where these features came from or why, but they are the inherent features of culture.

The idealization of culture in terms of interculturality assumes that culture in itself is good. In actual fact, our cultures and the cultures of others contain key myths for understanding ourselves, but there are other nefarious aspects to the identity-building process. All culture, including Western cultures, not only have myths, but these myths are linked to superstitions, some of them harmful and potentially dangerous for humanity. Edgar Morin (2007) says that every culture contains a mixture of superstitions, fictions, fixations, accumulated and uncriticized knowledge, gross errors and deep truths. For interculturality, it is important not to view key knowledge as superstitions and millenary knowledge, as has been common on the part of the colonizer. But above all else, the challenge is not to admit culture without being self-critical.

Another common understanding of interculturality is the affirmation of respect for differences. Policy is the guarantee of such respect. The context behind that claim is that of internal and intercontinental migration leading cultures to feel vulnerable. The generally unwelcoming cultures of the people towards which migrants are heading are major threats to their cultures. Common attitudes of xenophobia and racism are an affront to migrant lives.

Given the impossibility of accepting the other, the interculturality of differences inspires a series of security and psychological policies. Respect for differences emphasizes the physical integrity of the foreigner. Likewise, the discourse on differences accepts that, in order to value others and the other, one must value oneself. Policies implement communication strategies to change the xenophobic stereotypes among the allegedly superior culture.

Such racism brings the need for work on self-valuation, to generate attitudes of acceptance, self-security, and optimism. It is also important to look for new connections with culture. Psychological work is aimed at the acceptance of the personal being, which should lead to the acceptance of the cultural being. As can be seen, this challenge delves further inside the exposed cultures. However, in this field the results are limited if racism increases rather than decreases.

The interculturalism of differences looks to reduce intolerance and to generate the guarantee of diversity from a culture that is respectful of others. Such a position is important and meaningful from the perspective of others that are in vulnerable situations, but at the same time, this position is worrying because it is not connected to equality policies.

Interculturalism will be built as long as we learn to respect differences; notwithstanding the fact that the best way to put these conditions into place is by having a market-centered world, so it is the market that lays the foundations of tolerance for consumerism.

There is another vision of the interculturalism of differences that is a response to a more national and

indigenous context, which demands respect for heterogeneity, a demand that is written in struggles for fair and equal relationships. Mediations of the interculturality of differences involve such indicators as language, medicine, politics and education, which in actual fact are a break from ethnocentrism and the culture of the superior-inferior.

One of the problems with the interculturalism of differences is the relationship between ethnicity and class. There is no doubt that ethnicity is involved in the formation of marginal groups, and that their status as an exploited class increases racism. The questions are: is interculturality less radical when there is separation between the notions of ethnicity and poverty? Is interculturality diluted when no attempt is made to change the unfair system?

If we separate ethnicity from class, we need to accept the risk of intercultural politics. There is no interculturality without struggles to change an unfair system. However, justice is not radical if equal relations are not taken into account. Being a woman, indigenous or colored are factors that are not unconnected to capitalist exploitation. Therefore, interculturality is the recognition of differences within the conflict, so interculturality does not happen inside conflict. Interculturality has to be political.

The other form of interculturalism considers the knowledge of original cultures in relation to that of universal cultures. Knowledge is not fragmented as it is in Western sciences, and it is deep within culture. It allows for human action. In knowledge, affectivity and reason are united. The wise hold ethical authority.

Interculturality comes to the rescue of ancient knowledge. Natural medicine, binary structures, the vigesimal and decimal counting systems, plant taxonomies, animals, biotic and abiotic beings, and thought based on ancestral views of the cosmos, are the most common lines of ancestral knowledge.

Ancestral knowledge was deemed esoteric by Western sciences. Astronomy, architecture, economics, political state administration, sailing, warfare and archaeology were hidden and, in the best of cases, turned into museum pieces. Such knowledge is now beginning to be incorporated in universal scientific knowledge, not from serious debate, but from the recognition of differences and universal tolerance.

One way to build science with indigenous people is through scientific research. This involves seeking a descriptive phase, in order to set the original knowledge in its concrete state. According to Bachelard, the concrete state is the place where the spirit is recreated with the first images of phenomena and is based on philosophical literature. The problem is when research is limited to a mere description of the phenomena, because the knowledge is not then subjected to a self-critical phase, and is validated regardless.

Intercultural knowledge policies are directed at education. There is a challenge here in relation to Western education paradigms. Observation, experimentation and deductive and analytical logic are not alien to original knowledge, but its paradigms are integral, associating the subject with the object and the context, and its causality is circular and recursive.

The introduction of original knowledge to education is not only an education issue, it is a political issue too, and it means more than intellectual curiosity. It is part of life itself.

Another way to view interculturality is through its connection to the struggles with regard to pluriationalism. A plurinational state is seen as the only guarantee of interculturality, as long as it recognizes the radical differences within societies.

Plurinationality leads interculturality into the field of rights. Without a multinational state there are no rights. Plurinationality is the regulatory force against single-nation, homogeneous and mono-cultural colonial states.

In order to guarantee interculturality, the state must be reformed. Plurinationality is not only an ethnic concept; above all it is a political one. It is a concept that contains the conditions that make an indigenous life possible.

Plurinationality is a statute of life for the indigenous peoples; and a condition that is absent from modern politics. Plurinationality does not propose territorial fragmentation, political division or the destruction of the nation state. The statute that it proposes is unity within diversity. Many nations within one state.

The discourse of plurinationality is not the same as the discourse of autonomy for oligarchic and economic groups, which go against the nation state in order to commodify life.

The opposition to this type of interculturality comes from large-scale transnational enterprises, and from

governments defending their interests under the pretext of defending the national interest.

Plurinational interculturality looks to change power relations, and to transform unfair relations. Therefore, the political strength resides in the organization of indigenous people in order for them to decide on their own destiny. It is absurd to expect indigenous peoples and nations to be submitted to the fight against poverty, economic growth policies, or to the defense of the Amazon rainforest.

Over time, relationships with indigenous people have involved making them the subjects of aid policies, which is why they want a state that is respectful of those people who want to live differently.

Plurinationality and interculturality defy liberal thought and the power structure that comes from modernity. The struggles for plurinationality reveal how the fundamental rights proclaimed by European Liberalism are violent acts of colonialism.

This kind of interculturality is the most challenging in Latin America, and it recalls a comment once made by Morin: *there are times when the impossible is the only possible*. The danger is for such discriminatory rule to remain intact within indigenous groups under the primacy of autonomy policies within the same nation.

Finally, we find the discourse of interculturality attached to the European concept of multiculturalism, which grew out of a period of profound changes, with multiple crises, including the crisis of humanity due to processes of major decomposition. Along with economic, energy, food and environmental crises, there is a crisis that leads us to ask what we understand a human being to be, and what we understand being a man or a woman to mean.

Politically, multiculturality is a consequence of the radicalism of Democracy. It is not possible to be a democrat and a racist at the same time.

Spanish feminist philosopher Rosa Cobo says that, for Europeans of either gender, *it is difficult for us to look at the other because we have been socialized in the ideology of superiority; we live in the superior culture and believe that cultures are the others*. In other words, the main challenge faced by multiculturalism concerns the ideology of superiority on which the west has been built, and which sees the other as inferior. These 'others' go to Europe or the United States to take on roles of servitude; they go to do what the people of the west do not want to do. It is difficult for us in the west, from our positions of privilege, to understand the others who live among 'us'.

4. Regional Development, Sustainability and Higher Education Institutions in Latin America and the Caribbean: Towards the Consolidation of Meanings

Higher Education Institutions (HEI) in Latin America and The Caribbean have been constituted in the context of an oppressed, lagging, vulnerable, exploited region; development there, should it exist at all, comes in association to precariousness, and such precepts as freedom, equality and equity are peripheral elements (Sen 2000; Sen and Kliksberg 2007). In this environment, HEIs have assumed characteristics and identities that distinguish one from the other, but at the same time, unify and identify them. In a region that is blighted by the desperation and difficulty that nations must learn to deal with, HEIs offer a hint of hope, change and the chance to overcome hardship; they tend to build the new, that which is still to come, and where everything that the people yearn for converges in the hope of new interpretations, discourses, questions, fair judgment, critical and broad criteria that can achieve renewed forms of interaction and interconnection between the social, the natural, and the human, all consolidated in sustainability.

With this in mind, and considering the document that resulted from the III Regional Conference of Higher Education (CRES 2018), organized by the UNESCO International Institute for Higher Education in Latin America and The Caribbean (IESALC), the following lines highlight the priority meanings of higher education in the region. This is no minor matter, given that higher education can only be a factor for change if it has the capacity to critically observe its function in the social framework and as long as its goals and meanings are questioned, in order for them to be consolidated (Villoro 1974).

So, today more than ever, the meanings of HEIs must be linked to regional development grounded in sustainability, understood as a paradigm and an epistemic framework that integrates and generates synergies between disciplines, to cross the borders between them, and to create interdisciplinary spaces that contribute to the design of methodologies and interpretative frameworks that can enable critical analysis and the emergence of a common discourse to study

reality in all of its different and complex forms, and to help to solve problems (Gutiérrez 2012).

The following are the future goals of higher education, which we hope will subsequently help to trigger broader analysis:

A. *Interpretation*. The core of the identity of HEIs is that they drive meaningful contributions to the production of fresh readings of reality. And if they accomplish this, they might help to visualize and clarify complex phenomena, to bring to light that which is still hidden by tradition or subjection, to outline the incomplete and to contribute to a deeper comprehension of the socio-natural and spiritual reality.

B. *Will for integration and legitimization*. HEIs should be defined as settings that contribute to an understanding of the region as a space where synergies are formed that, operating under the concepts of sustainable development, seek local, regional and global cooperation; brotherhood among nations, the capability to legitimize and accept otherness as part of oneself and hence consolidate commitments to the design of social projects and systems to foster diversity, plurality, justice, democracy, political rights and liberties, and for these to be extended right across the region.

C. *To foster change as a relational process of expansion, transfer and continuity*. HEIs viewed as central elements in processes of change need to broaden their capabilities and systems to become interrelated in all settings of human interaction in order to transform relationships and unfair and unequal social and individual structures.

D. *To make education feasible*. Contemporary HEIs consider their job to involve generating spaces of experience that can trigger substantial changes to the methods and structures for interpreting the natural, the social and the human, both by university actors and by social subjects in general. The former contains two interconnected core elements: 1) education from experience is recognized as a space that gives meaning, new meanings and attributions to things in the world and to education itself, allowing the subject to organize reality and become self-realized, situated and involved in a given space and time (Honoré, 1980); 2). The educational experience on a relational level is a continuous process in which the subject is an active participant, and even the main author of their own configuration (Foucault 2014), and that of others, which is why the meaning of education must be assumed as a configuration of sustainable

identities and communities; shifting, at least on the intellectual level, from the lugubrious notion of higher education as a factory of the neoliberal subject[8].

There is no doubt that socioenvironmental dynamics configure a network of tensions between different elements: environmental, scientific, technological, methodological, epistemic, political, philosophical, social, cultural, artistic, human, ideological, popular, historical and economic, to mention only some of the strains that are different reflections of vulnerability and fragility in the region, and which call upon reality itself. In such a framework, HEIs in Latin America and the Caribbean need to take on a preponderant role, with shared commitments and major awareness of what they can contribute through analysis and intervention to the reorientation of the construction of a different world, a world that is more fertile and where the seeds of freedom[9] in the light of sustainable development, flourish and irradiate ferments of change.

5. Internationalization of Solidary and Academic Networks

University internationalization is a process that started in the 1980s, stimulated by the convergence of the following trends: a common academic model throughout the whole world that came from the Medieval European university system and was transferred to the rest of the globe; a growing global academic market, for students, teachers and researchers; the use of English as the internationally accepted language for research, communication and teaching; the advance of e-learning and use of Internet and new information and communication technologies in education processes; the tendency of academic institutions to associate with institutions in other countries, the creation of external campuses and the opening of franchises resulting from commercial regulations; and the standardization of certificates, courses, credits and other methods for evaluating and measuring academic progress, due to the local dissemination of internationalized regulations (Altbach 2002; Altbach and Teichler 2001; Brunner 2009; Didriksson 2008; García Guadilla 2010; Perrotta 2016).

8. See: Laval, C. and Dardot, P. (2013). La fábrica del sujeto neoliberal. In C. Laval and P. Dardot (Eds.), *La nueva razón del mundo, ensayos sobre la sociedad neoliberal* (pp. 325-379). Spain: Editorial Gedisa, S. A.
9. See: Villoro, L. (1974). La educación superior. In L. Villoro (Eds.), *Signos políticos* (p.159). Mexico: Editorial Grijalbo.

The consideration of higher education as a market good (commercial service) shook the foundations and changed the meanings of university policies around the world and shaped a competitive or Phoenician paradigm of internationalization (Perrotta 2016a). This meant the subordinated incorporation of Latin America and The Caribbean in this process (Landinelli 2008), thus increasing the divide between institutions and the countries at the center and on the peripheries (García Guadilla 2010; Perrotta 2016a). In consequence, university internationalization rose in importance on the agenda of international organizations, and in state public policies; together with debates between academics and political actors regarding the dispute between different university systems (Del Valle, Suasnábar & Montero 2017).

The reaction to these processes was immediate, both due to the mobilization of the academic sector and higher education institutions themselves, as well as university teachers' unions, and regional student federations. In the framework of these protests and responses, a central issue for higher education in our region was the conflict between the perspectives of *public* good and *market good* (Bizzozero 2006; Verger 2006); which since 2008 has been reconfigured in terms of rights versus *commodities* (Perrotta 2008, 2016a). It is important to stress that this process in the Latin American and Caribbean region has an additional edge derived from negotiations of the Free Trade Area of the Americas (FTAA) treaty of 1994 and 2005, which includes provisions for the deregulation of higher education, and which generated a transcontinental process of social upheaval (Feldfeber & Saforcada 2005).

Specifically regarding the matter of internationalization, although it is not given that name, the CEMES 1998 called for the configuration of networks as a defense strategy against the unequal distribution of global knowledge, characterizing this kind of cooperation on the principles of solidarity, mutual respect and symmetry.

The configuration of university networks enabled greater interaction among institutions and their academic communities, better use of each of their capabilities to boost individual strengths, and the establishment of new forms of integration and articulation (Zarur 2008). At the same time, these new forms of inter-university cooperation demanded the creation of synergies and complementarities, defying universities' identities (García Guadilla 2006; Krotsch 1997). Within the immediate setting of CRES 2008, international cooperation between universities was viewed as the starting point to allow knowledge to be shared horizontally and vertically (among universities, and among less favored sectors of society), and to strengthen regional integration processes (Gazzola & Goulart Almeida, 2006).

In this context, universities need to take an international and cooperative perspective that permeates the agenda of national governments, regional organizations and higher education institutions.

The organization of knowledge production within universities

The shift towards corporate-university models has led to an increase in inequalities inside universities, generating standards that allow for cost-cutting and increased income, in many cases aimed at profit. This has led to a decline in the labor conditions and numbers of teaching and support personnel, the latter meaning cleaning, security, and transportation services. These conditions are even worse when external programs and projects, which are heavily promoted to solve funding issues, are established in order to get the university to operate like a business.

At the same time, the attack on universities from different sectors (politics, government, business, fundamentalist religious groups) that are questioning its status as a common good, critical space and place for humanist education, has been echoed internally in the form of rejection of extracurricular or 'social action' programs, the arts, humanities and social sciences, and support their de-funding and disappearance.

Hence, the already-existing inequalities between permanent and temporary faculty, between different areas of knowledge, and between different substantive activities such as teaching, research and extracurricular programs have intensified, causing internal conflicts that affect the way that resources are allocated, positions of authority are defined and the ways that different sectors compete for university funds.

As long as people in insecure jobs have no access to spaces for democratic decision inside universities, these inequalities will get nothing but worse.

Recommendations

From this perspective, universities cannot be excluded from social criticism of development systems that encourage inequality and the wellbeing of an absolute minority, and destroy the fundamental conditions for life and existence. That is why the state, from its role as guarantor of sustainable human development, must continue to demand academic integrity in the organization of universities, most especially in three strategic areas: a) respect for life and rights for life, that is, the development of alternatives for human rights as opposed to commodification, control of intimacy, individuality and dignity, the privatization of health, indiscriminate genetic and food manipulation, and neglect for the future of new generations; b) the foundations of social organization, political domains and the local, national, regional or world economies, as opposed to single-mindedness, the irreversibility of domineering and exclusionary globalization, poverty, hunger, misery, marginalization and ignorance, and the theoretical and methodological perspectives that justify them; and, c) regarding the development of alternatives for cooperation, the community, the common good, rights for all, inter and trans-culturalism, security, citizen participation, organization and representation in governments and states (Petrella 2003, UNESCO, p. 130-131).

The conditions under which this must be accomplished and the challenges implied are huge, but neither can they be addressed solely from a locally-minded and non-pragmatic perspective; nor can they be achieved, socially speaking, without *a new approach to national and regional integration agreements*, associated to the new international division of knowledge, connecting science and technology with humanities, arts and interculturality. We cannot be swayed by narrow-minded nationalism, because isolated institutions would not be able to work together to take on the great challenges of the future.

Unlike what is happening in other parts of the planet, Latin American universities build their particular past and present identity from integral institutional autonomy, a collegiate and participatory government, and have maintained a predominantly public model, with important differences between its countries, and where universities are one of the few social institutions that recurrently take a critical stance, and where both students and teachers have constantly taken action against the barbarism, injustice and excessive authoritarianism

of governments, the rich and the powerful, whether local, national or foreign. They have also stood for the defense of the public good, of liberty and equality, of human rights and even for their own existence. That is why universities should also look towards their own internal inequalities, to promote the right to dignified work and democracy throughout the academic community.

During the last two decades, public universities in the region have promoted major structural changes to their platforms for networks and associations, to their processes of regionalization and integration, to their curricula, and to their orientation towards research and scientific and technological innovation. They have also promoted excellence in the production of new knowledge, despite global indicators clearly suggesting that the region has fallen comparatively behind the rest of the world, and progress has been made in the coordination of knowledge, interculturality and the relationship between humanities and sciences.

Universities should also look towards their own internal inequalities, to promote the right to dignified work and democracy throughout the academic community

Conclusions

Synergy between the humanities and arts, science and technology is a recent academic phenomenon at universities in the region, but there is a very long tradition of creativity and social innovation in the humanities, social sciences, arts and culture where many important schools of thought have taken root and proliferated. These processes have had major social impact and worldwide recognition, especially from philosophy and artistic education. More recently, a multi and interdisciplinary process has been developed to connect the humanities, science and technology with major intercultural and sustainability content.

However, the rising tendency regarding these synergies and new processes for articulating knowledge neither represent a structural change to the region's traditional disciplinary and profession-oriented university system, nor to the higher education system as a whole, because this system continues to reproduce and rely on state resources and its relations with political power, but most of all, because there is still inequality and inequity in its structures despite the context of new cognitive and

informational configurations that are questioning and challenging the current forms of power.

There is hence a need to combat the shift towards dependence on and domination of large businesses with regard to cognitive and informational capital and genomic manipulation, together with major communication, food, transportation and finance (credit and insurance) multinationals, which relate to the debate in some academic sectors about the importance of building endogenous knowledge platforms from a relationship with different stakeholders and contexts and with the state, and which leave us in a constant state of neo-peripheral subordination (Albagli and Maciel 2011)

In some countries in the region, progress has been made in this regard, but the conflict of interests and the real power of far-right neoliberal groups, bolstered by the rising mercantilization of higher education that has been prioritized over the possibility of fostering major changes to universities to thus promote new expressions and experiences from a multiplicity of knowledge, the construction of subjects who appropriate that knowledge, and the ripping apart of scientific and technologic determinism, in order to put universities at the service of a just and fair society, from a new humanism and deep-rooted social innovation, within spaces that produce "a new commons" (Ibid, p. 130).

The challenge is to transversally link such initiatives, and for it to be the state's duty to design a national education project that really is public and universally accessible. This is especially true in the case of Brazil, where there are still doubts in terms of the perspectives of state action, considering the forthcoming government. The responsibility of institutions and other agents in the field of higher education is, in this context, to push for these changes to happen, thus intensifying their social relevance. If this pressure is exerted together with the state in terms of public policy, then it also needs to happen in terms of human education, in shared dialogue with students about their right to a quality education, and their commitment to the construction of education as a public good.

In a broader sense, the two related practices mean the integration of science, technology, arts and innovation, because all those areas of knowledge are directly or indirectly involved. Opportunities for inclusion arise both in areas of knowledge like the humanities, and in the sciences too. In conclusion, these are innovative practices achieved through teacher training or through inclusive actions.

References

Albagli, S. & Maciel, M. L. (2011). "Informacao, poder e política: a partir do sul, para Alem do sul" in Maciel & Albagli. *Informacao, conhecimento e poder*. Río de Janeiro: Garamond.

Altbach, P. G. (2002). Perspectives on International Higher Education. *Change: The Magazine of Higher Learning*. Vol. 34:2, pp. 29-31.

Altbach, P. G. & Teichler, U. (2001). Internationalization and Exchanges in a Globalized University. *Journal of Studies in International Education*. Vol. 5:1, pp. 5-25, doi: 10.1177/102831530151002

Bizzozero, L. (2006). La educación superior en las negociaciones de comercio iternacional consecuencias y desafíos para el Mercosur. *Aldea Mundo*, vol. 11:20, pp. 19-28.

Brunner, J. J. (2009). The Bologna Process from a Latin American Perspective. *Journal of Studies in International Education*. Vol 13:4, pp. 417-438, doi: 10.1177/1028315308329805

Bonal, X. (2006). *Globalización, educación y pobreza en América Latina: ¿hacia una nueva agenda política?* Barcelona: CIDOB Edicions.

Del Valle, D. (comp); Montero, F., Mauro, S., Socolovsky, Y. (2017). *El derecho a la universidad en perspectiva regional. Ciudad Autónoma de Buenos Aires*. IEC: CLACSO. Available at: http://www.memoria.fahce.unlp.edu.ar/libros/pm.762/pm.762.pdf

Didriksson, A. (2008). El rol de la educación superior para el desarrollo humano y social en América Latina y el Caribe, in Global University Network for Innovation (GUNi) (ed). *La educación superior en el mundo: Educación superior, nuevos retos y roles emergentes para el desarrollo humano y social*. Madrid: Mundi-prensa.

Didriksson, A. (2018). Responsabilidad social territorial: nuevos desafíos para la autonomía universitaria, in Grimaldo, H. (coord.). *El rol de la educación superior de cara a los desafíos sociales de América Latina y el Caribe*. UNESCO- IESALC & Universidad Nacional de Córdoba.

Feldfeber, M. and Saforcada, F. (2005). *La educación en las Cumbres de las Américas: Un análisis crítico de las políticas educativas de la última década*. Buenos Aires: Laboratorio de Políticas Públicas, Miño y Dávila.

Foucault, M. (2014). *La hermenéutica del sujeto*. Argentina: Fondo de Cultura Económica de Argentina, S. A.

García Guadilla, C. (2006). Financiamiento de la educación superior en América Latina. In Global University Network for Innovation (GUNi) (ed). *La educación superior en el mundo 2006: la financiación de las universidades*. Madrid: Mundi-Prensa.

García Guadilla, C. (2010). *Educación superior comparada, El protagonismo de la internacionalización*. Caracas: UNESCO/IESALC–CENDES, Bid&Co.

Gazzola, A.L. and Goulart, S.R. (2006). *Universidade: cooperação internacional e diversidade*. Belo Horizonte: Editora UFMG.

Gutiérrez-Pérez, J. (2012). Condiciones óptimas para una ciencia de la sostenibilidad: implicaciones sustantivas para la investigación educativa y socioambiental contemporánea. *Rev. Ed. Pública, Cuiabá*, 21(47), pp. 571-596.

Honoré, B. (1980). *Para una teoría de la formación. Dinámica de la formatividad*. Madrid: Narcea, S.A.

Krotsch, P. (1997). La universidad en el proceso de integración regional: el caso del Mercosur. *Perfiles Educativos*, vol. 19:77.

Landinelli, J. (2008). Escenarios de diversificación, diferenciación y segmentación de la educación superior en América Latina y El Caribe. In: Gazzola, A.L. and Didriksson, A. (eds). (2008). *Tendencias de la Educación Superior en América Latina y el Caribe*. Caracas: UNESCO-IESALC.

Leite, D. (2018). Pedagogia da Reforma de Córdoba. *Integración y Conocimiento*, vol. 1, p. 00-53.

Morin, Edgar. (2007). *La cabeza bien puesta*. Buenos Aires, Argentina: Ediciones Buena Visión.

OECD/CAF/UN ECLAC. (2015). *Latin American Economic Outlook 2015: Education, Skills and Innovation for Development*. Paris: OECD Publishing. Doi: https://doi.org/10.1787/leo-2015-en.

Perrotta, D. (2008). La cooperación en MERCOSUR: el caso de las universidades. *Temas*, Vol. 54, pp. 67-76.

Perrotta, D. (2016). *La internacionalización de la universidad: debates globales, acciones regionales*. Los Polvorines: IEC-UNGS.

Petrella, R. (2003). Los pilares prioritarios para la construcción de otro mundo, pp. 119-131. In Rallo, A. (ed). *Un mundo para todos: otra globalización es posible*. Icaria.

Sen, A. (2000). *Development as freedom*. New York: Alfred A. Knopf, Inc.

Sen, A. and Kliksberg, B. (2007). *Primero la gente. Una mirada desde la ética del desarrollo a los principales problemas del mundo globalizado*. Spain: Ediciones Deusto.

UNESCO International Institute for Higher Education in Latin America and the Caribbean. (2008). *Declaration and action plan of the Regional Conference on Higher Education in Latin America and the Caribbean*. UNESCO Digital Library.

UNESCO. (2018). UNESCO Science Report: towards 2030. Paris: UNESCO. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000235406

Verger, A. (2006). La liberalización educativa en el marco del AGCS/GATS. Analizando el estado actual de las negociaciones. *Archivos Analíticos de Políticas Educativas*. Vol 14:9, pp. 1-23.

Villoro, L. (1974). *Signos políticos*. Mexico: Editorial Grijalbo.

Zarur, X. (2008). Integración regional e internacionalización de la educación superior en América Latina y el Caribe. In Gazzola, A. L. and Didriksson, A. (eds.) *Tendencias de la educación superior en América Latina y el Caribe*. Caracas: IESALC-UNESCO.