Higher Education in the World 7

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

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<td>3Os</td>
<td>Open Science, Open Innovation, Open to the World</td>
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<tr>
<td>AAAS</td>
<td>American Association for the Advancement of Science</td>
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<td>ACM</td>
<td>Association for Computing Machinery</td>
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<td>ACU</td>
<td>Association of Commonwealth Universities</td>
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<td>ACUP</td>
<td>Association of Catalan Public Universities</td>
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<td>ADN</td>
<td>Asia Democracy Network</td>
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<td>ADRN</td>
<td>Asia Democracy Research Networks</td>
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<td>AECHE</td>
<td>Arab-Euro Conference on Higher Education</td>
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<td>AERC</td>
<td>African Economic Research Consortium</td>
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<td>AI</td>
<td>Artificial Intelligence</td>
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<tr>
<td>AMC</td>
<td>Mexican Academy of Sciences</td>
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<td>AMH</td>
<td>Academy of Mobility Humanities</td>
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<td>AMHN</td>
<td>Asia Mobility Humanities Network</td>
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<td>AMRUT</td>
<td>Atal Mission for Rejuvenation and Urban Transformation</td>
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<tr>
<td>APU</td>
<td>Ritsumeikan Asia Pacific University</td>
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<td>AQuAS</td>
<td>Agency for Health Quality and Assessment of Catalonia</td>
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<td>ASD</td>
<td>Autism Spectrum Disorder</td>
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<td>AWMF</td>
<td>Andrew W. Mellon Foundation</td>
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<td>BG</td>
<td>Business Games</td>
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<td>BISS</td>
<td>Barcelona International Summer School</td>
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<td>BMAS</td>
<td>German Federal Ministry of Labour and Social Affairs</td>
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<td>BOAI</td>
<td>Budapest Open Access Initiative</td>
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<td>C3</td>
<td>Center for Complexity Sciences</td>
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<td>CAHS</td>
<td>Canadian Academy of Health Sciences</td>
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<td>CBOs</td>
<td>Community Based Organisations</td>
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<td>CBPR</td>
<td>Community Based Participatory Research</td>
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<td>CE</td>
<td>Community Engagement</td>
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<tr>
<td>Cedefop</td>
<td>European Center for the Development of Vocational Training</td>
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<tr>
<td>CEIPAC</td>
<td>Center for the Study of Provincial Interdependence in Ancient Classics</td>
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<td>CERN</td>
<td>European Organization for Nuclear Research</td>
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<td>CfH</td>
<td>Center for the Humanities</td>
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<td>CGE</td>
<td>Center for Global Engagement</td>
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<td>CHCI</td>
<td>Consortium of Humanities Centers and Institutes</td>
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<td>CHE</td>
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<td>Centre for Humanities Research</td>
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<td>CNRS</td>
<td>National Scientific Research Council (France)</td>
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<td>COB</td>
<td>Oceanographic Centre of the Balearic Islands</td>
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<td>COMbiNE</td>
<td>Complementary Methods in Evaluation Research</td>
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<td>CONACYT</td>
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<td>CONICET</td>
<td>National Council of Scientific and Technical Research of Argentina</td>
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<td>CoPs</td>
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<td>CPN</td>
<td>Center for the Promotion of Science</td>
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<td>CRAI</td>
<td>Resource Center for Learning and Research</td>
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<td>CRES</td>
<td>Regional Conference on Higher Education in Latin America and the Caribbean</td>
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<td>CVD</td>
<td>Cardiovascular Disease</td>
</tr>
<tr>
<td>DHET</td>
<td>Department of Higher Education and Training</td>
</tr>
<tr>
<td>DIY</td>
<td>Do It Yourself</td>
</tr>
<tr>
<td>DoE</td>
<td>Department of Education</td>
</tr>
<tr>
<td>DOI</td>
<td>Digital Object Identifier</td>
</tr>
<tr>
<td>DORA</td>
<td>Declaration on Research Assessment</td>
</tr>
<tr>
<td>DUT</td>
<td>Durban University of Technology</td>
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<tr>
<td>EASSH</td>
<td>European Alliance for Social Science and Humanities</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>ECLAC/CEPAL</td>
<td>Economic Commission for Latin America and the Caribbean</td>
</tr>
<tr>
<td>ECRC</td>
<td>Engaged Citizens, Responsive City</td>
</tr>
<tr>
<td>ECRs</td>
<td>Early Career Researchers</td>
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<tr>
<td>ECSA</td>
<td>European Citizen Science Association</td>
</tr>
<tr>
<td>ECTS</td>
<td>European Credit Transfer and Accumulation System</td>
</tr>
<tr>
<td>EE</td>
<td>Environmental Education</td>
</tr>
<tr>
<td>EGERA</td>
<td>Effective Gender Equality in Research and the Academia</td>
</tr>
<tr>
<td>EHEA</td>
<td>European Higher Education Area</td>
</tr>
<tr>
<td>EHL</td>
<td>Environmental Humanities Laboratory</td>
</tr>
<tr>
<td>EIA</td>
<td>Engagement and Impact Assessment</td>
</tr>
<tr>
<td>EMI</td>
<td>English-Medium Instruction</td>
</tr>
<tr>
<td>ENRESSH</td>
<td>Evaluative Research in the Social Sciences and Humanities</td>
</tr>
<tr>
<td>ENST-Bretagne</td>
<td>National School of Telecommunications of Brittany</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>--------------------</td>
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<tr>
<td>EOCGE</td>
<td>Employer of Choice for Gender Equality</td>
</tr>
<tr>
<td>EOSC</td>
<td>The European Open Science Cloud</td>
</tr>
<tr>
<td>EPNet</td>
<td>Economic and Political Network</td>
</tr>
<tr>
<td>ERA</td>
<td>European Research Area</td>
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<td>ERA</td>
<td>Excellence in Research Australia</td>
</tr>
<tr>
<td>ERC</td>
<td>European Research Council</td>
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<tr>
<td>ERP</td>
<td>Enterprise Resource Planning</td>
</tr>
<tr>
<td>ESA</td>
<td>European Space Agency</td>
</tr>
<tr>
<td>ESD</td>
<td>Education for Sustainable Development</td>
</tr>
<tr>
<td>ESFRI</td>
<td>European Strategy Forum on Research Infrastructures</td>
</tr>
<tr>
<td>ESO</td>
<td>European Southern Observatory</td>
</tr>
<tr>
<td>ESTEAM</td>
<td>Ethics, Science, Technology, Arts, Engineering and Mathematics</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EUA</td>
<td>European University Association</td>
</tr>
<tr>
<td>EUFP</td>
<td>European Union Framework Programme</td>
</tr>
<tr>
<td>Euratom</td>
<td>European Atomic Energy Community</td>
</tr>
<tr>
<td>FAIR</td>
<td>Findable, Accessible, Interoperable, Re-Usable</td>
</tr>
<tr>
<td>FLACSO</td>
<td>Latin American Faculty of Social Sciences</td>
</tr>
<tr>
<td>FNU</td>
<td>Fiji National University</td>
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<tr>
<td>FPIC</td>
<td>Free, Prior and Informed Consent</td>
</tr>
<tr>
<td>FPs</td>
<td>Framework Programmes</td>
</tr>
<tr>
<td>FTA</td>
<td>Free Trade Agreements</td>
</tr>
<tr>
<td>FTAA</td>
<td>Free Trade Area of the Americas</td>
</tr>
<tr>
<td>GAFA</td>
<td>Google, Apple, Facebook and Amazon</td>
</tr>
<tr>
<td>GAME</td>
<td>Young Mediterranean Ambassadors Group</td>
</tr>
<tr>
<td>GCEP</td>
<td>Global Competency Enhancement Programme</td>
</tr>
<tr>
<td>GEP</td>
<td>Gender Equality Policy</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gases</td>
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<tr>
<td>GIS</td>
<td>Geographic Information Systems</td>
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<td>GM Foods</td>
<td>Genetically Modified</td>
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<tr>
<td>GS</td>
<td>Global Situation</td>
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<tr>
<td>GUNi</td>
<td>Global University Network for Innovation</td>
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<tr>
<td>Gwd</td>
<td>Gigawatt-days</td>
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<tr>
<td>HAT</td>
<td>Humanities, Arts, Technology</td>
</tr>
<tr>
<td>HEIs</td>
<td>Higher Education Institutions</td>
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<tr>
<td>HEIW</td>
<td>Higher Education in the World Report</td>
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<tr>
<td>HESP</td>
<td>Hispanic and European Studies Program</td>
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<tr>
<td>Hfe</td>
<td>Humanities for the Environment Observatories</td>
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<tr>
<td>HLW</td>
<td>High-Level Waste</td>
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<tr>
<td>HPV</td>
<td>Human Papillomavirus Infection</td>
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<tr>
<td>HR</td>
<td>Human Resources</td>
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<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
</tr>
<tr>
<td>IAEN</td>
<td>National Institute of Higher Studies</td>
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<tr>
<td>IAS</td>
<td>Institute for Advanced Study</td>
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<tr>
<td>IAU</td>
<td>International Association of Universities</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>LIBER</td>
<td>Association of European Research Libraries</td>
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<tr>
<td>LINCC</td>
<td>Laboratory on Climate Change</td>
</tr>
<tr>
<td>LNNano</td>
<td>Brazilian Nanotechnology National Laboratory</td>
</tr>
<tr>
<td>LWR</td>
<td>Light-Water Reactor</td>
</tr>
<tr>
<td>MCU</td>
<td>Magna Charta Universitatum</td>
</tr>
<tr>
<td>MECD</td>
<td>Ministry of Education, Culture and Sports</td>
</tr>
<tr>
<td>MED-HUB</td>
<td>Knowledge Hub on the Euro-Mediterranean region</td>
</tr>
<tr>
<td>MESA</td>
<td>Mainstreaming Environment and Sustainability in African Universities</td>
</tr>
<tr>
<td>MHE</td>
<td>Mobility Humanities Education Center</td>
</tr>
<tr>
<td>MIT</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>MNAC</td>
<td>National Museum of Art of Catalonia</td>
</tr>
<tr>
<td>MOOC</td>
<td>Massive Online Open Course</td>
</tr>
<tr>
<td>MSCA</td>
<td>Marie Skłodowska-Curie Actions</td>
</tr>
<tr>
<td>MSD</td>
<td>Musculoskeletal Disorder</td>
</tr>
<tr>
<td>MSESD</td>
<td>Mediterranean Strategy on Education for Sustainable Development</td>
</tr>
<tr>
<td>MTG</td>
<td>Music Technology Group</td>
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<tr>
<td>NEET</td>
<td>Not in Education, Employment or Training</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NKUA</td>
<td>National Kapodistrian University of Athens</td>
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<tr>
<td>NPO</td>
<td>Non-Profit Organisation</td>
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<tr>
<td>NSF</td>
<td>National Science Board</td>
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<td>NUI</td>
<td>National University of Ireland</td>
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<td>NWO</td>
<td>Netherlands Organisation for Scientific Research</td>
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<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<td>OFCE</td>
<td>French Economic Observatory</td>
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<td>OIP</td>
<td>Office of International Programs</td>
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<td>ORCID</td>
<td>Open Researcher and Contributor ID</td>
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<tr>
<td>OSPP</td>
<td>Open Science Policy Platform</td>
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<tr>
<td>PAR</td>
<td>Participatory Action Research</td>
</tr>
<tr>
<td>PCT</td>
<td>Patent Cooperation Treaty</td>
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<tr>
<td>PERMSEA</td>
<td>Strategic Plan for the Overhaul and Improvement of Andorra's Education System</td>
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<tr>
<td>PISA</td>
<td>Participant Platform for Innovation, Social Inclusion and Active citizenship</td>
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<tr>
<td>PRESAGE</td>
<td>Research and Teaching Program of Knowledge on Gender</td>
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<tr>
<td>PRIA</td>
<td>Participatory Research in Asia</td>
</tr>
<tr>
<td>PRIMA</td>
<td>Partnership for Research and Innovation in the Mediterranean Area</td>
</tr>
<tr>
<td>PRIU</td>
<td>Regional Platform for University Integration</td>
</tr>
<tr>
<td>PSE</td>
<td>Participatory Settlement Enumeration</td>
</tr>
<tr>
<td>PSET</td>
<td>Post School Education and Training</td>
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<tr>
<td>PUA</td>
<td>Participatory Urban Appraisal</td>
</tr>
<tr>
<td>TCNJ</td>
<td>The College of New Jersey</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>TDR</td>
<td>Teacher Design Research</td>
</tr>
<tr>
<td>TEACHENER</td>
<td>Integrating Social Sciences and Humanities into Teaching about Energy</td>
</tr>
<tr>
<td>TeRRIFICA</td>
<td>Territorial Responsible Research and Innovation Fostering Innovative Climate Action</td>
</tr>
<tr>
<td>TFP</td>
<td>Total Factor productivity</td>
</tr>
<tr>
<td>THE</td>
<td>Times Higher Education</td>
</tr>
<tr>
<td>tHM</td>
<td>Tonne of Heavy Metal</td>
</tr>
<tr>
<td>TMX</td>
<td>Translation Memory eXchange</td>
</tr>
<tr>
<td>TVET</td>
<td>Technical Vocational Education and Training</td>
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<tr>
<td>UAB</td>
<td>Autonomous University of Barcelona</td>
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<td>UAM</td>
<td>Autonomous University of Madrid</td>
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<td>UAZ</td>
<td>Autonomous University of Zacatecas</td>
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<td>UB</td>
<td>University of Barcelona</td>
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<td>UBA</td>
<td>University of Buenos Aires</td>
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<td>UCL</td>
<td>University College of London</td>
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<td>UCLA</td>
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<td>UdeG</td>
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<td>University of Girona</td>
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<td>UdL</td>
<td>University of Lleida</td>
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<td>UEA</td>
<td>University of East Anglia</td>
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<td>UEMF</td>
<td>EuroMediterranean University Fes</td>
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<td>UFM</td>
<td>Union for the Mediterranean</td>
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<td>UFZ</td>
<td>Helmholtz Centre for Environmental Research</td>
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<td>UIB</td>
<td>University of the Balearic Islands</td>
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<tr>
<td>UIC</td>
<td>International University of Catalonia</td>
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<tr>
<td>UID</td>
<td>Unique Identification Document</td>
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<tr>
<td>UMAC</td>
<td>University Museums and Collections</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNA</td>
<td>National Arts University</td>
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<tr>
<td>UNAE</td>
<td>National University of Education of Ecuador</td>
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<td>UNAM</td>
<td>National Autonomous University of Mexico</td>
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<td>UNAN</td>
<td>National Autonomous University of Nicaragua</td>
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<tr>
<td>UNASUR</td>
<td>Union of South American Nations</td>
</tr>
<tr>
<td>UNDESAD</td>
<td>United Nations Decade of Education for Sustainable Development</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>UNDRIP</td>
<td>United Nations Declaration on the Rights of Indigenous Peoples</td>
</tr>
<tr>
<td>UNE</td>
<td>United Nations Environment</td>
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<td>UNARTE</td>
<td>National University of Experimentation of the Arts</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>Unicamp</td>
<td>University of Campinas</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>UNIMED</td>
<td>Mediterranean Universities Union</td>
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<tr>
<td>UniRitter</td>
<td>Ritter dos Reis University Center</td>
</tr>
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<td>UNLP</td>
<td>National University of La Plata</td>
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<tr>
<td>UNRISD</td>
<td>United Nations Research Institute for Social Development</td>
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<tr>
<td>UNU-EHS</td>
<td>United Nations University Institute for Environment &amp; Human Security</td>
</tr>
<tr>
<td>UNU-WIDER</td>
<td>United Nations University World Institute for Development Economics Research</td>
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<td>UOC</td>
<td>Open University of Catalonia</td>
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<td>UoN</td>
<td>University of Nairobi</td>
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<td>UoTs</td>
<td>Colleges and Universities of Technology</td>
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<td>UPC</td>
<td>Polytechnic University of Catalonia-BarcelonaTech</td>
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<td>UPF</td>
<td>Pompeu Fabra University</td>
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<td>UPV</td>
<td>University of the Basque Country</td>
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<tr>
<td>URF</td>
<td>Rovira i Virgili University</td>
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<tr>
<td>USIM</td>
<td>Board of Directors for Islamic Science</td>
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<td>USM</td>
<td>University Sains Malaysia</td>
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<td>USP</td>
<td>University of the South Pacific</td>
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<td>UVic</td>
<td>Vic University</td>
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<td>UWC</td>
<td>University of the Western Cape</td>
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<tr>
<td>VESS</td>
<td>Meaningful Life with Balance and Wisdom</td>
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<tr>
<td>VET</td>
<td>Vocational Education and Training</td>
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<td>WEF</td>
<td>World Economic Forum</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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<tr>
<td>WIPO</td>
<td>World Intellectual Property Organization</td>
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<tr>
<td>WP</td>
<td>Work Programmes</td>
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<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>WW2</td>
<td>World War Two</td>
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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); ProjectTA and ProjectTA-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
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**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.

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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 Prophodontics course in the Endodontics specialty 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 professional 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
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**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 CO2. 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 transformations under Neoliberalism, migration, and neoliberal trends in public universities.

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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.
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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 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.

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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.sensoymphsmithfield.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.

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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).

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

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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 interdisciplinar y 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.

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.

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
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 tackling 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? 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 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 the professional level.
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 Declaration⁵, 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 legitimization and evaluation matrices for the teaching 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 training⁶.” 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 test⁷.

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

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7. See Deleuze and Guattari (1993).
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 uncritiqued 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 plurinationalism. 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, multiculturalism 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).

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


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