

SOΦIA

Philosophy of Education Collection

Issue 28 / January-June 2020

Print ISSN 1390-3861 / Electronic ISSN 1390-8626



UNIVERSIDAD POLITÉCNICA SALESIANA DEL ECUADOR

SOPHIA, Collection of Philosophy of Education is a philosophical-scientific publication of the Salesian Polytechnic University (UPS), has a bi-annual periodicity, whose first number appeared in June of 2006. The objective of SOPHIA is to theorize the education from a philosophical point of view, with data from individual and collective psychology, teaching-learning experiences, sociology, culture and the development of the empirical sciences, to renew, update and better articulate the conceptual, procedural and experiential level of the education sciences. The journal promotes the dissemination of monographic articles that are unpublished, scientifically constructed, with a method that adequately articulates analysis and synthesis; that are propositive, in the nucleus of the Philosophy of Education. It is published in printed version (ISSN: 1390-3861) and electronic (ISSN: 1390-8626).

The management of SOPHIA is performed through the following parameters:

The journal uses anti-plagiarism systems  **Crossref**
Similarity Check
Powered by iThenticate 

The articles have identification code (*Digital Object Identifier*)



The editorial process is managed through the *Open Journal System* 
Open Journal Systems

It is an *Open Access* publication with a
Creative Commons license



The *copyright* and *post-print* policies are published in the *SHERPA/ROMEO* Auto-archive Policy Repository.

The articles of the present edition can be consulted in:

- <http://revistas.ups.edu.ec/index.php/sophia>
- <http://www.ensayistas.org/critica/revistas.htm>
- <https://www.redib.org>
- <http://www.iissue.unam.mx/iresie>
- <http://iresie.unam.mx>
- <http://clase.unam.mx>

Sophia is indexed in the following
Databases and scientific information systems

SELECTIVE DATABASES



JOURNAL EVALUATION PLATFORMS



SELECTIVE DIRECTORIES



SELECTIVE PERIODICALS AND NEWSPAPERS LIBRARIES



OPEN ACCESS SCIENTIFIC LITERATURE SEARCH ENGINES

DOAJ

EXALEAD

AUTO-ARCHIVE OF EDITORIAL COPYRIGHT POLICIES

SHERPA/ROMEO

OTHER BIBLIOGRAPHIC DATABASES

Dialnet
Portal de Difusión de la Producción Científica

Journal TOCs
The latest journal tables of Contents

biblat
Bibliografía Latinoamericana

CATALOG OF INTERNATIONAL UNIVERSITY LIBRARIES

CLAREMONT
MCKENNA
COLLEGE

University
of Victoria

UNIVERSITY
OF THE WEST

UNIVERSITY OF
Nebraska
Omaha

AUT
UNIVERSITY

DEPAUL
UNIVERSITY
COLLEGE OF LAW

TEXAS A&M UNIVERSITY
SAN ANTONIO

University
of Regina

SIMPSON
UNIVERSITY



Southwestern
University

FRANKLIN
COLLEGE



SOCIAL NETWORKS



Facebook: <https://www.facebook.com/SophiaUPS/>



Twitter: <https://twitter.com/RevistSophiaUPS>



Academia.edu: <https://independent.academia.edu/SophiaColeccióndeFilosofíadelaEducación>



ResearchGate: https://www.researchgate.net/profile/Sophia_Ups



Google: <https://plus.google.com/u/0/105223710240103280296>



LinkedIn: <https://www.linkedin.com/in/revista-sophia-ups-150108132?trk=hp-identity-name>

Sophia: Collection of Philosophy of Education, bi-annual publication, No. 28, January-June 2020. Responsible Editor: Floralba del Rocío Aguilar Gordón.

Place of publication: Salesian Polytechnic University of Ecuador. Postbox: 2074, Cuenca-Ecuador. Telephone: (+5397) 2831745, Cuenca-Ecuador. E-mail: revista-sophia@ups.edu.ec

© SOPHIA. Collection of Philosophy of Education.

Printed in Ecuador

The concepts expressed in the articles are the responsibility of the authors. It is allowed to reproduce the texts by citing the source.

EDITOR-IN-CHIEF / EDITORA JEFA

Post. Dra. Floralba del Rocío Aguilar Gordón
Universidad Politécnica Salesiana, Quito/Ecuador

ASSOCIATE EDITORS / EDITORES ASOCIADOS

Dr. José Manuel Touriñán López
Universidad de Santiago de Compostela, Galicia/España

Dr. Lorenzo García Aretio
Profesor Emérito de la Universidad Nacional de Educación a Distancia (UNED),
Madrid/España

Dr. Haibo Zeng
Communication University of China, Beijing /China

INTERNATIONAL COEDITORS / COEDITORES INTERNACIONALES

Dr. William Darío Ávila Díaz, Fundación Observatorio Multidisciplinario para la Construcción del Conocimiento, Bogotá/Colombia

Dr. Javier Collado Ruano, Centre International de Recherches et études Transdisciplinaires, París/Francia

Dr. Carlos Jesús Delgado Díaz, Universidad de La Habana, La Habana/Cuba

Dra. Virginia Gonfiantini, Universidad Nacional de Rosario, Rosario/Argentina

Dra. Martha Esther Guerra, Universidad Popular del Cesar, Valledupar, Cesar/Colombia

Dr. José Luis Guzón Nestar, Centro Educativo Salesiano Don Bosco, adscrito a la Universidad Complutense de Madrid, Madrid/España

Dr. Mauro Mantovani, Universidad Pontificia Salesiana de Roma, Roma/Italia

Dr. Julio Alberto Márquez Landa, Grupo Qualinet, Universidad Edgar Morín y Tecnológico de Monterrey, Monterrey/México

Dr. Dulio Oseda Gago, Universidad Nacional de Cañete, Lima/Perú

Dr. Rigoberto Pupo Pupo, Universidad José Martí de Latinoamérica, Monterrey/México; Multiversidad: Mundo Real Edgar Morin, Hermosillo/México y Universidad de La Habana, La Habana/Cuba

Dr. Héctor Marcelo Rodríguez Mancilla, Universidade Federal do Rio de Janeiro, Río de Janeiro/Brasil

Dr. Jaime Yanes Guzmán, Academia de Estudios e Investigación Complexus Edgar Morin (AEICEM), Santiago/Chile

SCIENTIFIC COMMITTEE / CONSEJO CIENTÍFICO

Dr. Rómulo Ignacio Sanmartín García, Universidad Politécnica Salesiana, Quito/Ecuador

Dr. Giuseppe Abbá, Universidad Pontificia Salesiana de Roma, Roma/Italia

Dr. Fernando Acevedo Calamet, Universidad de la República, Montevideo/Uruguay

Dr. Gustavo Altamirano Tamayo, Universidad Central del Ecuador, Quito/Ecuador

Dr. Jorge Antonio Balladares Burgos, Universidad Andina Simón Bolívar, Quito/Ecuador

Dr. Esteban Bara Francisco, Universidad de Barcelona, Barcelona/España
 Dr. Antonio Bernal Guerrero, Universidad de Sevilla, Sevilla/España
 Dr. Luis Antonio Hermosa Andújar, Universidad de Sevilla, Sevilla/España
 Dra. Aurora Bernal Martínez De Soria, Universidad de Navarra, Navarra/España
 Dr. Mauricio Hardie Beuchot Puente, Universidad Nacional Autónoma de México, Ciudad de México/México
 Dra. Patricia Cecilia Bravo Mancera, Universidad Nacional de Chimborazo, Riobamba/Ecuador
 Dr. Fabián Castiglione, Instituto Superior de Formación Docente Espíritu Santo, Quilmes/Argentina
 Dra. Ana Castro Zubizarreta, Universidad de Cantabria, Cantabria/España
 Dr. José Cavalcante Lacerda Junior, Universidad del Estado de Amazonas (UEA), Manaus/Brasil
 Dr. Jesús Conill Sancho, Universidad de Valencia, Valencia/España
 Dr. Carlos A. Cullen Soriano, Universidad de Buenos Aires, Buenos Aires/Argentina
 Dr. Raimundo De Teixeira Barradas, Universidad del Estado de Amazonas (UEA), Manaus/Brasil
 Dr. Enrique Domingo Dussel Ambrosini, Universidad Nacional Autónoma de México, Ciudad de México/México
 Dr. Juan Escamez Sánchez, Universidad Católica de Valencia, Valencia/España
 Dr. José Ramón Fabelo Corzo, Universidad Autónoma de Puebla, Puebla/México
 Dr. Ramón F. Ferreiro, Nova Southeastern University (NSU), Florida/Estados Unidos
 Dra. Claudia Figueroa, Universidad Pedagógica y Tecnológica de Colombia, Tunja/Colombia
 Dr. Juan Luis Fuentes, Universidad Complutense de Madrid, Madrid/España
 Dra. María García Amilburu, Universidad Nacional de Educación a Distancia, Madrid/España
 Dr. Fernando Gil Cantero, Universidad Complutense de Madrid, Madrid/España
 Dr. José Enrique Gómez Álvarez, Universidad Panamericana y Asociación Filosófica, Ciudad de México/México
 Dr. José Luis Gómez Martínez, Universidad de Georgia, Athens/Estados Unidos
 Dr. Vicent Gozávez Pérez, Universidad de Valencia, Valencia/España
 Dr. Pablo Manuel Guadarrama González, Universidad Central de las Villas, Santa Clara/Cuba
 Dra. Lucila Gutiérrez Santana, Universidad de Colima, Colima/México
 Dra. Ruth Heilbronn, Sociedad de Filosofía de la Educación de Gran Bretaña, Wycombe/ Gran Bretaña y UCL Institute of Education, London, London/United Kingdom
 Dr. Pádraig Hogan, National University of Ireland, Maynooth/Irlanda
 Dr. Kureethadam Joshtrom, Universidad Pontificia Salesiana de Roma, Roma/Italia
 Dr. Gonzalo Jover Olmeda, Universidad Complutense de Madrid, Madrid/España
 Dr. Sebastián Kaufmann Salinas, Universidad Alberto Hurtado, Santiago/Chile
 Dr. Jorge Luis León González, Universidad de Cienfuegos “Carlos Rafael Rodríguez”, Cienfuegos/Cuba
 Dr. Walter Marcelo Madueña, Instituto Superior Don Bosco, Unidad orgánica de la Universidad Católica de Angola, Luanda/Angola/Costa Atlántica de África
 Dr. Jair Miranda De Paiva, Universidad Federal de Espírito Santo (UFES) Centro Universitario Norte de Espírito Santo, San Mateo/Brasil
 Dr. Agustín Domingo Moratalla, Universidad de Valencia, Valencia/España
 Dr. Juan Antonio Nicolás Marín, Universidad de Granada, Granada/España
 Dra. Nancy Ochoa Antich, Investigadora Independiente, Quito/Ecuador
 Dr. Dieudonné Otepo Olabiyi Eniyankitan, Institut Supérieur de Philosophie et des sciences humaines Don Bosco. Instituto Superior de Filosofía y de Ciencias Humanas Don Bosco, Togo/ República Togolesa/África
 Dra. Ruth Enriqueta Páez Granja, Universidad Central del Ecuador, Quito/Ecuador

Dra. Cruz Pérez Pérez, Universidad de Valencia, Valencia/España
 Dr. Luis Porta, Universidad Nacional de Mar de la Plata, Buenos Aires/Argentina
 Dr. Rafael Repiso Caballero, Universidad Internacional de la Rioja (UNIR), Logroño/España
 Dr. Alberto Isaac Rincón, Observatorio Multidisciplinario para la construcción del Conocimiento- OBSKNOW, Bogotá/Colombia
 Dr. Luis Rosón Galache, Universidad Pontificia Salesiana de Roma, Roma/Italia
 Dr. Damian Salcedo Megales, Universidad Complutense de Madrid, Madrid/España
 Dr. Pier Cesare Rivoltella, Universidad Católica de S. Cuore di Milano é CREMIT, Milán/Italia
 Dr. Miguel Ángel Santos Rego, Universidad de Santiago de Compostela, Compostela/España
 Dr. Santiago De Pablo Contreras, Universidad de País Vasco, Bilbao/España
 Dr. Ralph Weber, Universidad de Basilea, Basilea/Suiza
 Dr. Alejandro José De Oto, Consejo Internacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires/Argentina
 Dr. Babu Thaliath, Jawaharlal Nehru University, New Delhi/India
 Dr. José Tranier, Universidad Nacional de Rosario, Rosario/Argentina
 Dra. Teresa Yurén, Universidad Autónoma del Estado de Morelos, Morelos/México

INTERNATIONAL REVIEWERS BOARD / CONSEJO INTERNACIONAL DE REVISORES

Dr. (c) William Fredy Aguilar Rodríguez, Universidad Técnica de Ambato, Ambato/Ecuador
 Dr. Jorge Alarcón Leiva, Universidad de Talca, Maule/Chile
 Dr. Mauricio Albornoz Olivares, Universidad Católica del Maule, Maule/Chile
 Dr. Miguel Aldama Del Pino, Universidad de Matanzas, Matanzas/Cuba
 Dra. Harlene Anderson, International Summer Institute, Estados Houston/Unidos
 Dra. Ximena Del Consuelo Andrade Cáceres, Universidad Politécnica Salesiana, Quito/Ecuador
 Dr. José Antonio Antón Amiano, IES Jiménez de Quesada de Santa Fe, Granada/España
 Dr. Abel Aravena Zamora, Universidad de Barcelona, Barcelona/España
 Dr. Carlos Ángel Arboleda Mora, Universidad Pontificia Bolivariana, Medellín/Colombia.
 Dr. Carlos Arturo Arias Sanabria, Pontificia Universidad Javeriana, Bogotá/Colombia
 Dra. María Milagros Armas Arráz, CPEI Multilingüe Minicole, Arrecife/España
 Dra. María Elena Arriagada Arriagada, Universidad Metropolitana de Ciencias de la Educación, Ñuñoa/Chile
 Mstr. Jorge Aros Vega, Pontificia Universidad Católica de Valparaíso, Valparaíso/Chile
 Dr. Alfonso Ávila Del Palacio, Universidad Autónoma de México, Ciudad de México/México
 Dr. Lorena Basualto Porra, Universidad Católica Silva Henríquez, Santiago/Chile
 Dra. Dulce María Bautista Luzardo, Universidad Central de Colombia, Bogotá/Colombia
 Dr. Cristian Eduardo Benavides, Universidad de Cuyo, Mendoza/Argentina
 Dr. Rodolfo Mauricio Bicocca, Universidad Nacional de Cuyo, Mendoza/Argentina
 Dr. Robert Fernando Bolaños Vivas, Universidad Politécnica Salesiana, Quito/Ecuador
 Dra. Alcira Beatriz Bonilla, Consejo Internacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires/Argentina
 Dr. Carmen Gloria Burgos Videla, Universidad Autónoma de México (UNAM), Ciudad de México/México
 Dra. Martha Burguet Arfelis, Universidad de Barcelona, Barcelona/España
 Dra. Elizabeth Cabalé Miranda, Universidad de La Habana, La Habana/Cuba
 Dra. Isabel Cantón Mayó, Universidad de León, León/España

Dra. María José Caram, Universidad Católica de Córdoba, Córdoba/España
Dra. Elsa Beatriz Cárdenas Sempértégui, Universidad Técnica Particular de Loja, Loja/Ecuador
Dr. Pablo Carranza, Universidad Nacional de Río Negro, Río Negro/Argentina
Dr. Carlos Augusto Casanova Guerra, Centro de Estudios Tomistas, Universidad Santo Tomás, Santiago/Chile
Dra. María Inés Castellaro, Centro de Estudios Filosóficos y Teológicos, Córdoba/Argentina
Dr. Demian Casaubon, Universidad de Buenos Aires, Buenos Aires/Argentina
Mstr. José Antonio Castorina, Universidad de Buenos Aires, Buenos Aires/Argentina
Dr. Juan H. Cepeda, Universidad Santo Tomás, Bogotá/Colombia
Dr. Vinicio Alexander Chávez Vaca, Universidad Internacional del Ecuador, Quito/Ecuador
Dr. Mauricio Chaspal Escudero, Universidad de Santiago de Chile, Santiago/Chile
Dr. Francisco Alonso Chica Cañas, Universidad Santo Tomás, Santiago/Chile
Dr. Maximiliano Basilio Cladakis, Universidad de San Martín, Buenos Aires /Argentina
Mstr. Francisco Cordero, Universidad Tecnológica de Chile, Santiago/Chile
Dra. (c) Yoskira Naylett Cordero De Jiménez, Universidad Politécnica Estatal de Carchi/Ecuador
Dr. Javier Corona Fernández, Universidad de Guanajuato, Guanajuato/México
Dr. Antonio Correa Iglesias, Universidad de Miami, Miami/Estados Unidos
Dr. Antonio Cremades Begines, Universidad de Sevilla, Sevilla/España.
Dr. Miguel Francisco Crespo, Escuela Latinoamericana de Pensamiento y Diseños Sistémicos, Coahuila/México
Dr. Richard De La Cuadra, Xavier Educational Academy, Houston/Estados Unidos
Dra. Janice Defehr, The Taos Institute, Winnipeg/Canada
Dr. Balaganapathi Devarakonda, Dravidian University, Kuppam/India
Dr. Jorge Aurelio Díaz, Universidad Católica de Colombia, Bogotá/Colombia
Dra. Andrea Alejandra Díaz, Universidad Nacional del Centro de la Provincia de Buenos Aires, Buenos Aires/Argentina
Dr. Javier Echenique Sosa, Universidad Andrés Bello, Santiago/Chile
Dr. Javier Echeverría, Universidad Politécnica de Madrid, Madrid/España
Dr. Omar Escalona Vivas, Universidad Nacional Experimental de los Llanos Occidentales Ezequiel Zamora, Barinas/Venezuela
Dra. Chaxiraxi María Escuela Cruz, Universidad de La Laguna, Tenerife/España
Dr. Luciano Espinoza Rubio, Universidad de Salamanca, Salamanca/España
Dr. Javier Alejandro Espinoza San Juan, Universidad Católica de la Santísima Concepción, Concepción/Chile
Post. Dr. Francisco Farnum Castro, Universidad de Panamá, Bella Vista/Panamá
Dra. Inés Fernández Mouján, Universidad de Buenos Aires, Buenos Aires/Argentina
Dr. Horacio Ferreyra, CONICET, Buenos Aires/Argentina
Dr. Rodrigo Figueroa Weitzman, Universidad Andrés Bello, Santiago/Chile
Dr. Ernesto Flores Sierra, Pontificia Universidad Católica del Ecuador, Quito/Ecuador
Dr. Cristóbal Friz Echeverría, Universidad de Santiago de Chile, Santiago/Chile
Dr. Roberto Agustín Follari, Universidad Nacional de Cuyo, Mendoza/Argentina
Dr. Dante Augusto Galeffi, Universidad Federal de Bahía, Salvador/Brasil
Dr. Wenceslao García Puchades, Universidad de Valencia, Valencia/España
Dr. Jonathan García Campos, Universidad Juárez del Estado de Durango, Durango/México
Dra. Teresa Gargiulo, Universidad de Congreso, Mendoza/Argentina
Dra. Aleidá Carolina Gelpí Acosta, Universidad de Puerto Rico en Bayamón, Bayamón/Puerto Rico
Dr. Fabián Giménez Gatto, Instituto de Profesores Artigas, Montevideo/Uruguay
Dra. Laura Gioscia Villar, Universidad de la República, Montevideo/Uruguay

Dr. Facundo Giuliano, Universidad de Buenos Aires, Buenos Aires/Argentina
 Dr. Juan David Gómez Osorio, Universidad de Antioquia, Antioquia/Colombia
 Dr. José Domingo Gómez Rozas (Txomin), Universidad de País Vasco, Bilbao/España
 Dr. José Luis González Geraldo, Universidad de Castilla - La Mancha, Toledo/España
 Dra. Lucero González, Universidad Nacional Autónoma de México, Ciudad de México/México
 Dr. Javier González Solas, Universidad Complutense de Madrid, Madrid/España
 Dra. Yuliana Gómez Zapata, Tecnológico de Antioquia, Antioquia/Colombia
 Dra. María Cornelia Gottschalk Cristiane, Universidade de São Paulo, São Paulo/Brasil
 Dr. Javier García Calandín, Universidad de Valencia, Valencia/España
 Dra. Gabriela Grajales García, Universidad Autónoma de Chiapas (UNACH), Chiapas/México
 Dr. Javier Guardado Mendoza, Instituto de Investigaciones en Educación de la Universidad Veracruzana, Veracruz/México
 Dr. Samuel Guerra Bravo, Investigador independiente, Quito/Ecuador
 Dr. Jónas Gustafsson, Investigador Independiente, Dinamarca
 Dr. Ernesto Andrés Hermann Acosta, Universidad Tecnológica Equinoccial, Quito/Ecuador
 Mstr. Nadia Hernández Soto, Normal de Especialización Humberto Ramos Lozano, Monterrey/México
 Dr. Francisco Javier Herrero Hernández, Universidad Pontificia de Salamanca (UPSA), Salamanca/España
 Dr. Édison Francisco Higuera Aguirre, Pontificia Universidad Católica del Ecuador, Quito/Ecuador
 Dr. José Ramón Holguín Brito, Asociación de Rectores de Universidades del Caribe y América, ARCA, Santo Domingo/República Dominicana
 Dr. André Hubert Robinet, Universidad Católica del Norte-Antofagasta, Antofagasta/Chile
 Dr. Felipe Martín Huete, Universidad de Granada, Granada/España
 Dr. Damián Islas Mondragón, Universidad Juárez del Estado de Durango, Durango/México
 Mstr. Lilian Jaramillo Naranjo, Universidad Central del Ecuador, Quito/Ecuador
 Dr. John Christopher Kommalapudi, Ethiopian Civil Service University, Adís Adebá/Etiopía
 Dr. Guillermo Lariguet, Universidad Nacional de Córdoba, Córdoba/España
 Dr. Camilo Larrea Oña, Investigador Independiente, Quito/Ecuador.
 Dr. Xavier Laudo, Universitat Oberta de Catalunya, Catalunya/España
 Dr. Heber Leal Jara, Universidad de Concepción, Concepción/Chile
 Dra. Natalia Lerussi, Universidad de Buenos Aires, Buenos Aires/Argentina
 Dr. Orlando Lima, Universidad Autónoma de México (UNAM), Ciudad de México/México
 Dr. Idalmis López Sanchez, Instituto Latinoamericano y Caribeño, La Habana/Cuba
 Mstr. Luis Rodolfo López Morocho, Ministerio de Educación, Quito/Ecuador
 Dr. (c) Cristian López, Universidad de Buenos Aires, Buenos Aires/Argentina
 Dr. Julio López Saco, Universidad Central de Venezuela, Caracas/Venezuela
 Dra. Inmaculada López Francés, Universidad de Valencia, Valencia/España
 Dr. Samuel López Olvera, Universidad Pedagógica Nacional, Ciudad de México/México
 Dra. María Del Mar Lorenzo Moledo, Universidad de Santiago de Compostela, Coruña/España
 Dr. José Feliz Lozano Aguilar, Universidad Politécnica de Valencia, Valencia/España
 Dra. María Luján Christiansen, Universidad de Guanajuato, Guanajuato/México
 Dra. Gloria Luque Moya, Centro María Zambrano Asociado a la UNED, Madrid/España.
 Dra. Delia Manzanero, Red Europea de Alumni, Madrid/España
 Dra. Josseilin Jasenka Marciano Ortega, Instituto Universitario de Tecnología de Puerto Cabe-
 llo, Carabobo/Venezuela
 Dra. Inés Márquez, Universidad Federal de Bahía, Salvador/Brasil
 Dr. Xicoténcatl Martínez Ruiz, Revista Innovación Educativa, Ciudad de México/México

Dr. Jethro Masís, Universidad de Costa Rica, San Pedro/Costa Rica
 Dra. Claudia María Maya Franco, Universidad de Medellín, Medellín/Colombia
 Dr. Eloy Maya Pérez, Universidad de Guanajuato, Campus Celaya-Salvatierra, Guanajuato/México
 Dr. Itzel Mayans, Universidad Autónoma de México (UNAM), Ciudad de México/México
 Dr. Aquiles José Medina Marín, Universidad Bolivariana de Venezuela, Caracas/Venezuela
 Dr. Aquiles Meduba, Universidad Bolivariana de Venezuela, Caracas/Venezuela
 Dr. Oscar Mejía Quintana, Universidad Nacional de Colombia, Bogotá/Colombia
 Dra. Juliana Merçon, Universidad Veracruzana, Veracruz/México
 Dra. Paula Cristina Mira Bohórquez, Universidad de Antioquia, Antioquia/Colombia
 Dr. Jesús Molina, Universidad de Murcia, Murcia/España
 Dr. Mauricio Molina Gallardo, Universidad de Costa Rica, San Pedro/ Costa Rica
 Dr. Eduardo Gabriel Molino, Instituto Alicia M. de Justo, Buenos Aires/Argentina
 Dr. Agostino Molteni, Universidad Católica de la Santísima Concepción, Concepción/Chile.
 Dra. Laura Elizabeth Montenegro, Universidad Politécnica Salesiana, Quito/Ecuador
 Dr. Juan Diego Moya, Universidad de Costa Rica, San Pedro/ Costa Rica
 Dr. Enrique V. Muñoz Pérez, Universidad Católica de Maule, Maule/Chile
 Dr. Rafael Niño De Zepeda G., Universidad Católica Silva Henríquez, Santiago/Chile
 Dr. Matías Oroño, Universidad de Buenos Aires, Buenos Aires/Argentina
 Dra. Andrea Paula Orozco, Corporación Universitaria Minuto de Dios, Bogotá/Colombia
 Dr. Delfín Ortega Sánchez, Universidad de Burgos, Burgos/España
 Dra. Dorys Noemi Ortiz Granja, Pontificia Universidad Católica del Ecuador, Quito/Ecuador
 Dr. José Manuel Osorio, Universidad San Ignacio de Loyola, La Molina/Perú
 Dra. Yanet Padilla Cuellar, Universidad Central “Marta Abreu”, Santa Clara/Cuba
 Dr. Daniel Vicente Pallares Domínguez, Universitat Jaime I, Castelló/España
 Dra. Diana Melisa Paredes Oviedo, Universidad de Antioquia, Antioquia/Colombia
 Dr. Álvaro Julio Peláez Cedrés, Universidad Autónoma Metropolitana, Ciudad de México/México
 Dr. Luigi Pellegrino, Diócesis de Zacapa, Guatemala.
 Dr. Sergio Pérez Cortés, Universidad Autónoma de México, Iztapalapa/México.
 Dra. Andrea Verónica Pérez, Universidad Nacional de Quilmes, Quilmes/Argentina
 Dr. Alipio Omar Pérez Jacinto, Universidad de Ciencias Pedagógicas Rubén Martínez Villena de La Habana, La Habana/Cuba
 Dr. Antonio Pérez, Universidad Nacional Experimental Simón Rodríguez de Venezuela, Caracas/Venezuela
 Dra. Isis Angélica Pernas Álvarez, Universidad de Cuenca, Cuenca/Ecuador
 Dra. Michael A. Peters, University of Waikato, Hamilton/Nueva Zelanda
 Dr. Edgar Osvaldo Pineda, Universidad Santo Tomas de Villavicencio, Villavicencio/Colombia
 Dr. Iván Alfonso Pinedo Cantillo, Universidad Nacional de Colombia, Bogotá/Colombia
 Dr. Edward Andrés Posada Gómez, Pontificia Universidad Bolivariana, Antioquia/Colombia
 Dra. Miriam Prieto, Universidad Autónoma de Madrid, Madrid/España
 Dr. Xavier Puig Peñalosa, Universidad del País Vasco, Bilbao/España
 Dr. Luis Guillermo Quijano Restrepo, Universidad Tecnológica de Pereira, Pereira/Colombia
 Dr. Pablo Hernando José Quintanilla Pérez, Universidad Católica del Perú, San Miguel/Perú
 Dr. Ciro Diego Radicelli García, Universidad Nacional de Chimborazo, Riobamba/Ecuador
 Dr. Vicente Raga Rosaleny, Universidad de Antioquia, Antioquia/Colombia
 Mstr. Sandra Ligia Ramírez Orozco, Universidad Católica de Colombia, Bogotá/Colombia
 Dr. José Antonio Ramírez Díaz, Centro Universitario de Ciencias Sociales y Humanidades, Guadalajara/México
 Dra. Eva Reyes Gacitúa, Universidad Católica del Norte, Antofagasta/Chile

Dr. Javier Gustavo Río, Universidad Nacional de San Martín, Buenos Aires/Argentina
 Dra. Ruth Selene Ríos Estrada, Universidad Autónoma Metropolitana Unidad Xochimilco, Xochimilco/México
 Dra. Susie Riva Mossman, Creighton University, Omaha/United States
 Dr. José Alberto Rivera Piragaula, Universidad Rovira i Virgili de Tarragona, Tarragona/España
 Dra. Angélica María Rodríguez Ortiz, Universidad Autónoma de Manizales, Manizales/Colombia
 Dr. Mariano Luis Rodríguez González, Universidad Complutense de Madrid, Madrid/España
 Dr. Francisco Rodríguez Lestegas, Universidad de Santiago de Compostela, Coruña/España
 Dr. Pedro Rodríguez Rojas, Universidad Simón Rodríguez, Caracas/Venezuela
 Dra. Laura Graciela Rodríguez, Universidad Nacional de La Plata, La Plata/Argentina
 Dr. Miguel Giovanni Romero Flores, Instituto de Altos Estudios Nacionales (IAEN), Quito/Ecuador
 Dr. Javier Romero, Universidad de Salamanca, Salamanca/España
 Dra. Clara Romero Pérez, Universidad de Huelva, Huelva/España
 Dr. Julio Ernesto Rubio Barrios, Tecnológico de Monterrey, Monterrey/México
 Dra. María José Rubio, Pontificia Universidad Católica del Ecuador, Ibarra/Ecuador.
 Dr. Adelmo Sabogal Padilla, Academir Charter School Miami, Miami/Estados Unidos
 Dr. Carlos Skliar, Facultad Latinoamericana de Ciencias Sociales (FLACSO) y Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires/Argentina
 Dr. Carlos Sanhueza, Universidad de Chile, Santiago/Chile
 Dr. Freddy Orlando Santamaría Velasco, Pontificia Universidad Bolivariana, Medellín/Colombia
 Dr. Jacir Sansón Junior, Universidad Espírito Santo, San Mateo/Brasil
 Dra. Nancy Santana, Revista Ágora-Trujillo, Trujillo/Venezuela
 Mstr. Dalia Santa Cruz Vera, Universidad Católica de Colombia, Bogotá/Colombia
 Dr. Ricardo Florentino Salas Astraín, Universidad Católica de Temuco, Temuco/Chile
 Dr. Ángel Alonso Salas, Colegio de Ciencias y Humanidades Plantel Azcapotzalco, de la Universidad Nacional Autónoma de México (UNAM)
 Dr. Raúl Francisco Sebastián Solanes, Universidad de Valencia, Valencia/España
 Dr. Vicente Serrano Marín, Universidad Autónoma de Chile, Providencia/Chile
 Dra. Natalia Sgreccia, Universidad Nacional de Rosario, Rosario/Argentina
 Dr. José Emilio Silvaje Aparisi, Universidad de Valencia, Valencia/España
 Mstr. Verónica Patricia Simbaña Gallardo, Universidad Central del Ecuador, Quito/Ecuador
 Mstr. Sandra Siqueira, Facultad Salesiana Don Bosco Manaus –Amazonas-, Manaus/Brasil
 Dr. Orlando Solano Pinzón, Pontificia Universidad Javeriana, Bogotá/Colombia
 Dr. David Alfonso Solís Nova, Universidad Católica de la Santísima Concepción, Concepción/Chile
 Dra. Carol Del Carmen Terán González, Universidad de Los Andes, Mérida/Venezuela
 Dr. Iván Gregorio Torres Pacheco, Universidad de Carabobo, Carabobo/Venezuela
 Dr. Jesús Turiso Sebastián, Universidad Veracruzana, Veracruz/México
 Mstr. Manuel Antonio Unigarro Gutiérrez, Universidad Cooperativa de Colombia, Medellín/Colombia
 Dr. Mariano Ernesto Ure, Universidad Católica Argentina, Buenos Aires/Argentina
 Dra. Mónica Elizabeth Valencia, Universidad de Carabobo, Carabobo/Venezuela
 Dr. Iván Daniel Valenzuela Macareno, Universidad Libre, Bogotá/Colombia
 Dr. Carlos Eduardo Valenzuela, Universidad Pedagógica Nacional de Colombia, Bogotá/Colombia
 Dr. Jesús Valverde Berrocoso, Universidad de Extremadura, Badajoz/España
 Dr. Sergio Octavio Valle Mijangos, Universidad Tecnológica de Tabasco, Tabasco/México.
 Mstr. Mirta Ala Vargas Pérez, Universidad del Valle de Puebla, Puebla/México.
 Mstr. Anabella Beatriz Vázquez Morales, Universidad de la República, Montevideo/Uruguay

Dra. Victoria Vásquez Verdera, Universidad de Valencia, Valencia/España
Dra. Marcela Venebra Muñoz, Universidad Autónoma del Estado de Toluca/México
Dra. Jessica Lourdes Villamar Muñoz, Universidad Politécnica Salesiana, Quito/Ecuador
Dr. Marcelo Villamarín Carrascal, Pontificia Universidad Católica de Ecuador, Quito/Ecuador
Dra. Carmen Vállora Sánchez, Centro de Enseñanza Superior en Humanidades y Ciencias de la Educación Don Bosco, Madrid/España
Dr. Juan Pablo Viola, Universidad de Piura, Piura/Perú
Dr. Frank Bolívar Viteri Bazante, Universidad Politécnica Salesiana, Quito/Ecuador
Mstr. Eduard Mauricio Wong Jaramillo, Universidad La Gran Colombia Seccional Armenia, Quindío/Colombia
Dr. Jaime Yáñez Canal, Universidad Nacional de Colombia, Bogotá/Colombia
Dr. José María Zamora Calvo, Universidad Autónoma de Madrid, Madrid/España

THE BOARD OF MANAGEMENT / CONSEJO TÉCNICO

Abya-Yala Coordination: Hernán Hermosa Mantilla

Correction and style: Paulina Torres Proaño

Layout: Martha Vinueza Manosalvas

Cover design: Marco Vinicio Gutiérrez Campos

OJS support: Angel Luis Torres Toukoumidis; Carmen Soledad Aguilar Loja;
Christian Gabriel Arpi Fernández y Wilson Verdugo

Technical management and diffusion: Jefferson Alexander Moreno Guaicha

PUBLISHING BOARD / CONSEJO DE PUBLICACIONES

Javier Herrán Gómez, sdb
PRESIDENT

Juan Pablo Salgado
Juan Bottasso Boetti, sdb (+)

José Juncosa Blasco
Floralba Aguilar Gordón

René Unda Lara
Jaime Padilla Verdugo
Sheila Serrano Vincenti

Fabricio Freire Morán
John Calle Sigüencia

Betty Rodas Soto
Mónica Ruiz Vásquez

Luis Álvarez Rodas
EDITOR GENERAL

SALESIAN POLYTECHNIC UNIVERSITY OF ECUADOR

Javier Herrán Gómez, sdb

Rector

© Salesian Polytechnic University
Turuhuayco 3-69 and Calle Vieja
Postbox 2074
Cuenca, Ecuador.
Telephone: (+593 7) 2 050 000
Fax: (+593 7) 4 088 958
E-mail: srector@ups.edu.ec

EXCHANGE

Exchange is accepted with other periodicals.

Address to:

Technical Secretariat for Communication and Culture
Salesian Polytechnic University
Av. Turuhuayco 3-69 y Calle Vieja
Postbox 2074
Cuenca, Ecuador.
PBX: (+593 7) 2 050 000 - Ext. 1182
Fax: (+593 7) 4 088 958
E-mail: rpublicas@ups.edu.ec
www.ups.edu.ec
Cuenca - Ecuador

Sophia: Collection of Philosophy of Education, bi-annual publication,
No. 28, January-June 2020.

Chief Editors:

Dra. Floralba del Rocío Aguilar Gordón, Dr. Vicent Gozávez Pérez

Design: Abya-Yala University Press.

Av. 12 de Octubre N22-22 and Wilson UPS-Bloque A.

Tel.: (+593 2) 2 506 247, Quito-Ecuador.

E-mail: editorial@abyayala.org

Print: Centro Gráfico Salesiano (Antonio Vega Muñoz 10-68 y General Torres).

Tel.: (+593 7) 2 831 745, Cuenca-Ecuador.

E-mail: centrograficosalesiano@lms.com.ec

CODE OF CONDUCT

«Sophia» as a publication that seeks the highest international excellence, is inspired by the ethical code of the Committee on Publications Ethics (COPE), aimed at publishers, reviewers and authors.

Authors' commitments

- **Originality and fidelity of the data:** The authors of originals sent to «SOPHIA» attest that the work is original and unpublished, which does not contain parts of other authors or other fragments of works already published by the authors. In addition they confirm the veracity of the data, that is, that the empirical data have not been altered to verify hypotheses.
- **Multiple and/or repetitive publications:** The author should not publish articles in which the same results are repeated in more than one scientific journal or any other non-academic publication. The simultaneous proposal of the same contribution to multiple scientific journals is considered an ethically incorrect and reprehensible practice.
- **Attributions, quotations and references:** The author must always provide the correct indication of the sources and contributions mentioned in the article.
- **Authorship:** The authors guarantee the inclusion of those people who have made a significant scientific and intellectual contribution in the conceptualization and planning of the work as in the interpretation of the results and in the writing of it. At the same time the order of appearance of the authors has been ranked according to their level of responsibility and involvement.
- **Access and retention:** If the members of the Editorial Board consider it appropriate, the authors of the articles should also make available the sources or data on which the research is based, which can be kept for a reasonable period of time after publication and possibly becoming accessible.
- **Conflict of Interest and Disclosure:** All authors are required to state explicitly that there are no conflicts of interest that may have influenced the results obtained or the proposed interpre-



tations. Authors should also indicate any funding from agencies and/or projects from which the research article arises.

- **Errors in published articles:** When an author identifies an important error or inaccuracy in his/her article, he/she should immediately inform the editors of the journal and provide them with all the information necessary to list the relevant corrections at the bottom of the article (always in a Note to the margin, not to alter the publication).
- **Responsibility:** The responsibility of the content of the articles published in «SOPHIA» is exclusive of the authors. The authors also commit themselves to a review of the most current and relevant scientific literature on the analyzed subject, taking into accounts in a plural form the different streams of knowledge.



Commitments of reviewers

- **Contribution to editorial decision:** Peer review is a procedure that helps publishers make decisions about proposed articles and also allows the author to improve the quality of articles submitted for publication. The reviewers undertake a critical, honest, constructive and unbiased review of both the scientific quality and the literary quality of writing in the field of their knowledge and skills.
- **Respect of review times:** The reviewer who does not feel competent in the subject to review or who cannot finish the evaluation in the scheduled time must notify the publishers immediately. The reviewers commit to evaluate the manuscripts in the shortest possible time in order to comply with the deadlines, since in «Sophia» the limits of custody of the waiting manuscripts are limited and inflexible due to respect of the authors and their work.
- **Confidentiality:** Each assigned manuscript must be considered confidential. Therefore, these texts should not be discussed with other people without the express consent of the publishers.
- **Objectivity:** Peer review should be done objectively. Reviewers are required to give sufficient reasons for each of their assessments, always using the review template. The reviewers will submit a complete critical report with appropriate references according to the «Sophia» revision protocol and the public gui-

delines for the reviewers; especially if it is proposed that the work be rejected. They are required to advise editors if substantial portions of the work have already been published or are under review for another publication.

- **Text visualization:** The reviewers commit to indicate precisely the bibliographic references of fundamental works possibly forgotten by the author. The reviewer should also inform editors of any similarity or overlap of the manuscript with other published works.
- **Anonymity:** To ensure that the review process is as objective, unbiased and as transparent as possible, the identity of the authors is deleted before the papers are submitted for peer review. If, for any reason, the identity of the authors, their institutional affiliations or any other information that jeopardizes the anonymity of the document has been compromised, the reviewer must notify the publishers immediately.



Commitment of publishers

- **Decision of publication:** The editors will guarantee the selection of the most scientifically qualified reviewers and specialists to express a critical and expert appreciation of the work, with the least possible biases. «Sophia» chooses between 2 and 3 reviewers for each work so as to ensure greater objectivity in the review process.
- **Honesty:** Publishers evaluate articles submitted for publication on the basis of scientific merit of the contents, without discrimination of race, gender, sexual orientation, religion, ethnic origin, nationality, and political opinion of the authors.
- **Confidentiality:** Publishers and members of the working group agree not to disclose information relating to submitted articles for publication to persons other than authors, reviewers and publishers. The editors and the Editorial Committee commit themselves to the confidentiality of the manuscripts, their authors and reviewers, so that anonymity preserves the intellectual integrity of the whole process.
- **Conflict of interests and disclosure:** publishers commit not to use in their own research content of articles submitted for publication without the written consent of the author.

- **Respect of the review times:** Publishers are responsible for compliance with the time limits for revisions and publication of accepted manuscripts, to ensure a rapid dissemination of their results. They commit themselves to complying with published times (maximum of 60 days in the estimation/rejection from receipt of the manuscript in the Review Platform) and a maximum of 150 days from the beginning of the scientific review process by experts).

**«Sophia» adheres to the Code of Conduct
Committee on Publication Ethics (COPE):
<http://publicationethics.org/resources/code-conduct>**



CÓDIGO ÉTICO

«Sophia» como publicación que busca la máxima excelencia internacional, se inspira en el código ético del Comité de Ética de Publicaciones (COPE), dirigido tanto a editores como a revisores y autores.

Compromisos de los autores

- **Originalidad y fidelidad de los datos:** Los autores de originales enviados a «Sophia» atestiguan que el trabajo es original e inédito, que no contiene partes de otros autores o de otros fragmentos de trabajos ya publicados por los autores. Además confirman la veracidad de los datos, esto es, que no se han alterado los datos empíricos para verificar hipótesis.
- **Publicaciones múltiples y/o repetitivas:** El autor no debe publicar artículos en los que se repitan los mismos resultados en más de una revista científica o cualquier otra publicación de carácter o no académica. La propuesta simultánea de la misma contribución a múltiples revistas científicas es considerada una práctica éticamente incorrecta y reprochable.
- **Atribuciones, citas y referencias:** El autor debe suministrar siempre la correcta indicación de las fuentes y los aportes mencionados en el artículo.
- **Autoría:** Los autores garantizan la inclusión de aquellas personas que han hecho una contribución científica e intelectual significativa en la conceptualización y la planificación del trabajo como en la interpretación de los resultados y en la redacción del mismo. Al mismo tiempo se ha jerarquizado el orden de aparición de los autores conforme a su nivel de responsabilidad e implicación.
- **Acceso y retención:** Si los miembros del Consejo Editorial lo consideran apropiado, los autores de los artículos deben poner a disposición también las fuentes o los datos en que se basa la investigación, que puede conservarse durante un periodo razonable de tiempo después de la publicación y posiblemente hacerse accesible.
- **Conflicto de intereses y divulgación:** Todos los autores están obligados a declarar explícitamente que no hay conflictos de





intereses que puedan haber influido en los resultados obtenidos o las interpretaciones propuestas. Los autores también deben indicar cualquier financiación de agencias y/o de proyectos de los que surge el artículo de la investigación.

- **Errores en los artículos publicados:** Cuando un autor identifica en su artículo un importante error o una inexactitud, deberá inmediatamente informar a los editores de la revista y proporcionarles toda la información necesaria para listar las correcciones pertinentes en la parte inferior del mismo artículo (siempre en nota al margen, para no alterar la publicación).
- **Responsabilidad:** La responsabilidad del contenido de los artículos publicados en «Sophia» son exclusivas de los autores. Los autores se comprometen también a que se ha realizado una revisión de la literatura científica más actual y relevante del tema analizado, teniendo presente de forma plural las diferentes corrientes del conocimiento.

Compromisos de los revisores

- **Contribución a la decisión editorial:** La revisión por pares es un procedimiento que ayuda a los editores para tomar decisiones sobre los artículos propuestos y también permite al autor mejorar la calidad de los artículos enviados para su publicación. Los revisores asumen el compromiso de realizar una revisión crítica, honesta, constructiva y sin sesgo, tanto de la calidad científica como de la calidad literaria del escrito en el campo de sus conocimientos y habilidades.
- **Respeto de los tiempos de revisión:** El revisor que no se sienta competente en la temática a revisar o que no pueda terminar la evaluación en el tiempo programado, deberá notificar de inmediato a los editores. Los revisores se comprometen a evaluar los trabajos en el menor tiempo posible para respetar los plazos de entrega, dado que en «Sophia» los límites de custodia de los manuscritos en espera son limitados e inflexibles por respeto a los autores y sus trabajos.
- **Confidencialidad:** Cada manuscrito asignado debe ser considerado como confidencial. Por lo tanto, estos textos no se deben discutir con otras personas sin el consentimiento expreso de los editores.

- **Objetividad:** La revisión por pares debe realizarse de manera objetiva. Los revisores están obligados a dar razones suficientes para cada una de sus valoraciones, utilizando siempre la plantilla de revisión. Los revisores entregarán un informe crítico completo con referencias adecuadas según protocolo de revisiones de «Sophia» y las normativas públicas para los revisores; especialmente si se propone que el trabajo sea rechazado. Están obligados a advertir a los editores si partes sustanciales del trabajo ya han sido publicadas o están bajo revisión para otra publicación.
- **Visualización de texto:** Los revisores se comprometen a indicar con precisión las referencias bibliográficas de obras fundamentales posiblemente olvidadas por el autor. El revisor también debe informar a los editores de cualquier similitud o solapamientos del manuscrito con otros trabajos publicados.
- **Anonimidad:** Para garantizar que el proceso de revisión sea lo más objetivo, imparcial y transparente posible, la identidad de los autores se suprimen antes de ser enviados los trabajos a revisión por pares. Si se da el caso de que por alguna causal se ha visto comprometida la identidad de los autores, sus filiaciones institucionales o algún otro dato que ponga en riesgo la anonimidad del documento, el revisor debe notificar de inmediato a los editores.



Compromiso de los editores

- **Decisión de publicación:** Los editores garantizarán la selección de los revisores más cualificados y especialistas científicamente para emitir una apreciación crítica y experta del trabajo, con los menores sesgos posibles. «Sophia» opta por seleccionar entre 2 y 3 revisores por cada trabajo de forma que se garantice una mayor objetividad en el proceso de revisión.
- **Honestidad:** Los editores evalúan los artículos enviados para su publicación sobre la base del mérito científico de los contenidos, sin discriminación de raza, género, orientación sexual, religión, origen étnico, nacionalidad, opinión política de los autores.
- **Confidencialidad:** Los editores y los miembros del grupo de trabajo se comprometen a no divulgar información relativa a los artículos enviados a la publicación a otras personas que no sean autores, revisores y editores. Los editores y el Comité Edi-

torial se comprometen a la confidencialidad de los manuscritos, sus autores y revisores, de forma que el anonimato preserve la integridad intelectual de todo el proceso.

- **Conflicto de intereses y divulgación:** Los editores se comprometen a no utilizar en sus investigaciones contenidos de los artículos enviados para su publicación sin el consentimiento por escrito del autor.
- **Respeto de los tiempos:** Los editores son responsables máximos del cumplimiento de los límites de tiempo para las revisiones y la publicación de los trabajos aceptados, para asegurar una rápida difusión de sus resultados. Se comprometen fehacientemente a cumplir los tiempos publicados (máximo de 60 días en la estimación/desestimación desde la recepción del manuscrito en la Plataforma de Revisión) y máximo 150 días desde el inicio del proceso de revisión científica por expertos).



«Sophia» se adhiere a las normas de código de conductas
del **Committee on Publication Ethics (COPE)**:
<http://publicationethics.org/resources/code-conduct>

OPEN SOCIAL POLICY

«Sophia» Is an open access journal entirely free for readers and authors that encourage the re-use and self-archiving of articles in databases, repositories, directories and international information systems. In this sense, «Sophia» has a Creative Commons 3.0 License of Non-Commercial Recognition and is included in the directory of Open Access DOAJ. The magazine only retains the rights to publish the works, both in print and digital formats.



25



1. Copyright

The work published in the «Sophia» Journal are subject to the following terms:

- 1.1. The Universidad Politécnica Salesiana (RUC: 0190151530001) Preserves the copyrights of the published works, and favors and allows their re-use under the Creative Commons Attribution-Non-commercial-No Derivative Works 3.0 Ecuador license, for which they may be copied, used, distributed, transmitted And publicly display, provided that:
 - 1.1.a. The authorship and original source of their publication is cited (magazine, editorial, URL and DOI of the work).
 - 1.1.b. Do not use for commercial or onerous purposes.
 - 1.1.c. The existence and specifications of this license are mentioned.
- 1.2. The publication will grant each item a Digital Object Identifier (DOI). Example:

2. Open Access policy

2.1. «Sophia» Is an open access journal, available in open access with no time restrictions, and is included in the Directory of Open Access Journals (DOAJ).

2.2. Self-archiving conditions: Authors are allowed to re-use published works, that is, post-print (or the final post-peer review or PDF version of the publisher) may be archived for non-commercial purposes, including their deposit in institutional repositories, thematic or personal web pages. Color Sherpa/Romeo: Blue.

3. Right of readers

3.1. Readers have the right to read all of our articles for free immediately after publication. This publication does not have any economic charge for the publication or for access to the material.

26



4. Automatic publishing

«Sophia» Makes its articles available in trusted third-party repositories (i.e. Redalyc, Latindex, institutional repositories...) immediately after publication.

5. Archiving

This journal uses different national and international repositories such as Redalyc, Latindex, Dialnet, REDIB... The Portico repository and the Institutional Repository of the SUniversidad Politécnica Salesiana (Ecuador) are digitally archived and indexed.

6. Machine readability and interoperability

Full text, metadata, and citations of articles can be traced and accessed with permission. Our open social policy also allows the readability of the files and their metadata, facilitating interoperability under the OAI-PMH protocol of open data and open source. Files from both full-length publications and their article segmentation are available in open HTML, XML, but also PDF, E-Pub and ISSUU formats, making it easy to read on any device and computing platform.

POLÍTICA SOCIAL ABIERTA

«Sophia» es una revista de acceso abierto enteramente gratuita para lectores y autores que favorece la reutilización y el auto-archivado de sus artículos en bases de datos, repositorios, directorios y sistemas de información internacionales. En este sentido, «Sophia» cuenta con una Licencia Creative Commons 3.0 de Reconocimiento No-Comercial y se encuentra incluida en el directorio de Acceso Abierto DOAJ. La revista solo conserva los derechos de publicación de las obras, tanto de la versión impresa como las digitales.



27



1. Derechos de autor

Las obras que se publican en la Revista «Sophia» están sujetas a los siguientes términos:

- 1.1. La Universidad Politécnica Salesiana (RUC: 0190151530001) conserva los derechos patrimoniales (copyright) de las obras publicadas, y favorece y permite la reutilización de las mismas bajo la licencia Creative Commons Reconocimiento-No-Comercial-Sin Obra Derivada 3.0 Ecuador, por lo cual se pueden copiar, usar, difundir, transmitir y exponer públicamente, siempre que:
 - 1.1.a. Se cite la autoría y fuente original de su publicación (revista, editorial, URL y DOI de la obra).
 - 1.1.b. No se usen para fines comerciales u onerosos.
 - 1.1.c. Se mencione la existencia y especificaciones de esta licencia de uso.
- 1.2. La publicación otorgará a cada artículo un Digital Object Identifier (DOI). Ejemplo: Valdés-Pérez, D. (2016). Incidencia de las Técnicas de Gestión en la mejora de las decisiones administrativas. Sophia, 6(12), 199-213. <https://doi.org/10.17163/ret.n12.2016.05>

2. Política de Acceso Abierto

2.1. «Sophia» es una revista de Acceso Abierto, disponible en acceso libre (open Access) sin restricciones temporales, y se encuentra incluida

en el Directorio de Revistas de Acceso Abierto (Directory of Open Access Journals-DOAJ).

2.2. Condiciones de auto-archivo: Se permite a los autores la reutilización de los trabajos publicados, es decir, se puede archivar el post-print (o la versión final posterior a la revisión por pares o la versión PDF del editor), con fines no comerciales, incluyendo su depósito en repositorios institucionales, temáticos o páginas web personales. Color Sherpa/Romeo: Azul.

3. Derecho de los lectores

3.1. Los lectores tienen el derecho de leer todos nuestros artículos de forma gratuita inmediatamente posterior a su publicación. Esta publicación no efectúa cargo económico alguno para la publicación ni para el acceso a su material.

28



4. Publicación automática

«Sophia» hace que sus artículos estén disponibles en repositorios confiables de terceros (p.ej. Redalyc, Latindex, repositorios institucionales...) inmediatamente después de su publicación.

5. Archivado

Esta revista utiliza diferentes repositorios nacionales como internacionales donde se aloja la publicación, tales como Redalyc, Latindex, Dialnet, REDIB... El repositorio Portico y el Repositorio Institucional de la Universidad Politécnica Salesiana (Ecuador) archivan digitalmente y garantizan a su vez la indización.

6. Legibilidad en las máquinas e interoperabilidad

El texto completo, los metadatos y las citas de los artículos se pueden rastrear y acceder con permiso. Nuestra política social abierta permite además la legibilidad de los archivos y sus metadatos, propiciando la interoperabilidad bajo el protocolo OAI-PMH de open data y código abierto. Los archivos, tanto de las publicaciones completas, como su segmentación por artículos, se encuentran disponibles en abierto en formatos HTML, XML, pero también en PDF, E-Pub e ISSUU, lo que facilita la lectura de los mismos en cualquier dispositivo y plataforma informática



PHILOSOPHY, TECHNOLOGY
AND INNOVATION IN EDUCATION
FILOSOFÍA, TECNOLOGÍA E INNOVACIÓN
EN LA EDUCACIÓN

SUMARY

Editorial 33-40

ARTICLES / ARTÍCULOS

ARTICLES RELATED TO THE CENTRAL THEME

Artículos relacionados con el tema central

NEED OF TECHNOLOGY FROM METAPHYSICS AND ETHICS

La necesidad de la técnica desde la metafísica y la ética

Juan Camilo Hernández Rodríguez and Jhonatan Pérez Bedoya. 43-66

HOMO SLOTERDIJK: PHILOSOPHY OF TECHNOLOGY IN POSTMODERNITY

Homo Sloterdijk: filosofía de la tecnología en la Posmodernidad

Leopoldo Edgardo Tillería Aqueveque. 67-90

TECHNO-SCIENCE AND CONSILIENCE AS AN AGENDA FOR THE PHILOSOPHY OF TECHNOLOGY

Tecnociencia y consiliencia como una agenda para la filosofía de la técnica

José Luis Guzón Nestar. 91-114

EDUCATIONAL CYBERNETICS, ACTORS AND CONTEXTS

IN DISTANCE HIGHER EDUCATION SYSTEMS

Cibernética educativa, actores y contextos en los sistemas
de educación superior a distancia

Angélica María Rodríguez Ortiz and Eduardo Isaac Chávez Cibrián 115-134

MOBILE-LEARNING MEDIATED WITH PACIE METHODOLOGY

FOR CONSTRUCTIVIST KNOWLEDGE

El mobile learning mediado con metodología PACIE

para saberes constructivistas

Juan Carlos Cobos Velasco, Verónica Patricia Simbaña Gallardo

and Lilian Mercedes Jaramillo Naranjo 135-156

MISCELLANEOUS / MISCELÁNEOS

SOCIAL IMAGINARIES ABOUT THE USE OF TECHNOLOGY AND INTERPERSONAL

RELATIONSHIPS IN UNIVERSITY STUDENTS THROUGH FICTION FILMS

AS A DIDACTIC RESOURCE

Imaginarios sociales sobre uso de tecnología y relaciones

interpersonales en jóvenes universitarios a través del cine de ficción

como recurso didáctico

Julio Cuevas Romo 159-176

31



BEYOND THE TABLET, ¿AN INTERMEDIATE ZONE OF LEARNING? Más allá de la <i>tablet</i> , ¿una zona intermedia de aprendizaje? <i>María Isabel Miranda Orrego and Isaac David Grijalva Alvear</i>	177-198
POTENTIAL FOR INNOVATION AND INSTITUTIONAL MANAGEMENT AT THE NATIONAL UNIVERSITY OF CAÑETE-PERU Potencial de innovación y gestión institucional en la Universidad Nacional de Cañete-Perú <i>Dulio Oseda Gago, Ruth Katherine Mendivel Geronimo and Amanda Durán Carhuamaca</i>	199-226
TRANSFORMATIONAL LEADERSHIP FROM THE PERSPECTIVE OF HUMANIST PEDAGOGY El liderazgo transformacional desde la perspectiva de la pedagogía humanista <i>Oscar Alfredo Rojas Carrasco, Amely Dolibeth Vivas Escalante, Katihuska Tahiri Mota Suárez and Jennifer Zurina Quiñonez Fuentes .</i>	227-250
THE ECUADORIAN CRISIS OF AESTHETIC REPRESENTATION FROM THE SECOND HALF OF THE 20TH CENTURY TO THE BEGINNING OF THE 21ST CENTURY Crisis de la representación estética ecuatoriana desde la segunda mitad del siglo XX hasta comienzos del XXI <i>Pablo Eugenio Cabrera Zambrano</i>	251-274
EDITORIAL GUIDELINES / NORMAS EDITORIALES	275-322
ANNOUNCEMENTS 2020 - 2025 / CONVOCATORIAS 2020 - 2025	323-332



EDITORIAL

Sophia is pleased to present the publication issue 28 of its collection. This time, the core of reflection is about: philosophy, technology and innovation in education.

The changes of the digital age, as well as the innovation processes and technoscientific advances have shaped new ways of being, of thinking, of being-there and of relating to the world (Aguilar, 2011). Therefore, today, more than never, it is necessary to reflect on the philosophical foundations of technology and the implications that it may have in the various areas of human action, especially in the educational field. Thus, the subject of the present issue is of essential interest in the construction of a coherent, situated and purposeful education that promotes pedagogical updating and innovation and responds to the challenges of the current technological and educational reality.

In this sense, we proposed some questions that direct the investigations of this issue, such as the following: What have been the educational consequences of technological implementations in the classroom? To what kind of education can technological progress without limits lead us? What is the new role of the education professional in the era of innovation and accelerated technological changes? What are the philosophical foundations of technology? How to support educational processes in connectivity and computational thinking without restricting the development of critical and creative thinking of the human being? Can technology guarantee educational excellence? What are the contributions of technology to improve the teaching-learning process? How do technological devices influence the academic performance and intellectual development of the student? What are the problems and limits of technology in education? among others.

Currently it has become a necessary condition to link to the definition of 'technology' elements related to the internet and the digital, however, *tekhné* has accompanied man from his first tools for hunting, with which he began to manipulate nature of according to his needs and possibilities. However, when scrutinizing its etymological root, it is found that the origin of the word technology 'is of Greek origin and that it refers to the terms: τέχνη (*tekhné*) = 'technique' or 'art' and λόγος (*logos*)



= ‘study’ or ‘treatise’; both polysemic terms, which can be interpreted in different ways, but that this case designate the ‘study of the technique’.

The Greeks conceived that there was an extensive path between technique and technology, since the former was limited to manual labor and practical knowledge, while the latter included scientific and theoretical knowledge. As Mario Bunge (1984) states, “the pre-scientific technique was primarily a collection of not understood pragmatic recipes, many of which performed the function of magical rites; [meanwhile, modern technology is] increasingly —although not exclusively— applied science” (p. 22), hence it is understood that in the 17th and 18th centuries it becomes unsustainable to speak of technology without the technological binomial and without the convergence between ‘theory’ and ‘praxis’. Therefore, technology and science constitute:

A cycle of interacting systems that feed each other. The scientist makes intelligible what the technician does and this provides science of instruments and testing; and what is equally important, the technician does not cease to ask the scientist questions thus adding an external engine to the internal engine of scientific progress (Bunge, 1984, pp. 22-23).

Technology surpasses the pragmatic field of technique by including scientific elements, however, it is not simply limited to being applied science, it goes further, providing a new treatment, with a scientific approach, to practical problems. Thus, according to Bunge (1984), “technology, whether of new things or of men, is a source of new knowledge” (p. 22), since its capacity to be applied to the various areas of human life opens countless possibilities, knowledge and proposals for action. Thus, we arrive at one of the most recognized current conceptions of the term ‘technology’, which is defined by Morales (1998) as “the set of knowledge and techniques that, applied in a logical and orderly manner, allow the human being to modify his material or virtual environment to meet his needs” (p. 25), which combines thought and action in the process with the purpose of generating useful solutions.

According to Echeverría (2005), technological advances have brought about a substantial change in scientific work, since it is no longer just about doing research, but from it “we have to generate technological developments that result in innovations that are put into practice in the market, in business, in society” (p. 10), and consequently in education, in the teaching-learning processes and methodologies that it comprises and in the way of understanding and relating to the being of Education.



One of the biggest challenges facing current education and that has been reinforced by the lack of conscious reflection on the technoscientific changes of the time, is the growing apogee of instrumental reason over critical reason, which guides academic work and philosophical reflection under an epistemic tendency that overvalues knowledge with “immediate application utility, mediated by technology and that generates financial benefits” (2019, p. 66), over other types of knowledge; as argued by Aguilar (et al., 2019). From this perspective, technology moves away from the main objective of education which is the formative action of the human being for his own realization.

For the philosophy of education, the contributions and innovations of technology must respond to the ultimate goal of education, which is the integral development of the human being; under no circumstances should it be instrumentalized or objectified. Technology will be another tool at the service of the human being, to enhance our capabilities, because as Balladares states (et al., 2016): “Human intelligence together with information technology is still human but is enriched making it possible to solve problems more quickly, efficiently and with better levels of complexity and organization” (p. 154). However, in addition to its role as a practical tool at the service of the individual, technology, as explained by Gagné (1976 in Area, 2009), will contribute to education by developing “a set of systematic techniques and practical knowledge attached to design, measure, and update” (p. 17) the educational action, and thus respond to the demands of the educational reality and current social dynamics.

At present, digital technology has made it possible to transcend both the temporal and spatial limits of formal education, shortening its barriers and limitations through a network connection and instant communication that makes the internet viable. Likewise, technological innovations such as smartphones, tablets, social networks, and the different virtual learning platforms have become tools and means that facilitate access to information and enhance learning. However, it should be borne in mind that the implementation of state-of-the-art technological tools and virtual platforms in institutions are not, by themselves, a guarantee of better educational results. It is necessary to know how, when and where to adopt technological innovations, avoiding, as stated by Cobo and Moravec (2011), “a vertical, uniform and standardized implementation” (p. 83). It is necessary to prepare in advance the necessary objective conditions and train the educational agents for their correct use and exploitation.

In this context, talking about philosophy, technology, and innovation in education moves our thinking towards three fundamental dimen-



sions that make up a theoretical-practical corpus mediated by reflection and that have, as the sole and main reference, the subject that thinks, builds, reconstructs and proposes.

In order to respond to problems and dimensions we have discussed, the approved manuscripts for the publication of this issue have been organized from a conceptual and interdisciplinary framework to a methodological-experiential and even experiential level, which surrounds its protagonists.

The article “*Survival or well-being? Need of the technique from metaphysics and ethics*”, by Juan Camilo Hernández Rodríguez and Jhonatan Pérez Bedoya, opens the reflection itinerary. The authors consider that the philosophical question regarding the technique is important because it responds to the essence of the human to the extent that only man is a properly technical subject and because it is considered as the vital function of the human being. In this sense, the writers intend to investigate various philosophical conceptions of the human technical essence from the metaphysical conception of José Ortega y Gasset and from the bioethical conception of Hans Jonas; from an anthropological approach, they discuss the concepts ‘well-being’ versus ‘need’.

The document “*Homo Sloterdijk: philosophy of technology in post-modernity*” follows the intellectual path, written by Leopoldo Edgardo Tillería Aqueveque. The article addresses the different guidelines, problems, and challenges of the philosophy of the German thinker Peter Sloterdijk, which, according to the author, is presented as “a new ontology”, whose essential component is the principle of information. The manuscript allows us to understand the post-liberal project as a postmodern philosophy of technique, which, from the perspective of Sloterdijk, allows us to understand technology as a destination within the history of being. In this sense, the author of this paper presents his political criticism as unmasking of the macrosphere of power (military, financial, journalistic, fiscal) and his biotechnological offensive as a manifesto of a historically invisible quinism by what he calls “elite cynicism” and for the idea of truth as a non-essential concept to his psychopolitical project.

Next, the article “*Techno-science and consilience as an agenda for the philosophy of technology*”, prepared by José Luis Guzón Nestar, is presented. In this manuscript, the author points out some paths made in the dialogue between science and technology over the last decades; he describes the main milestones that have led these processes from classical (Newtonian) science to current technoscience. And offers some reflections on the new philosophy of technique that is built with the theo-



retical development of consilience. In this sense, he describes the technoscience project in its historical perspective; places the technique in the history of science and technology; addresses the possibility (also need) of new wisdom and transdisciplinary vision of these issues. Finally, he points out some steps that are being taken in the field of technical philosophy and analyzes the emergence of ethical approaches and new views of science-technology-society.

The manuscript “*Educational Cybernetics, actors and contexts in distance higher education systems*”, structured by Angélica María Rodríguez Ortiz and Eduardo Isaac Chávez Cibrián, marks our path forward. The authors argue that distance higher education assumes great challenges in the pursuit of updating technological mediations that allow for social interactivity and interaction processes; they promote the recognition of the actors and the context in order to favor the development of the general and specific competencies that the new professionals require to respond to the needs of the social and educational environment. The authors believe that educational cybernetics allows the recognition of actors as human beings who assume challenges for the transformation of the economic and social system.

In this intellectual process of systematization of thought, the article “*Mobile learning mediated with PACIE methodology for constructivist knowledge*” is next. Presented by Juan Carlos Cobos Velasco, Verónica Patricia Simbaña Gallardo, and Lilian Mercedes Jaramillo Naranjo. The document aims to analyze how mobile devices in teaching-learning processes help students and teachers interact immediately in the construction of knowledge; In addition, the authors present points of view about various conceptions that support m-learning and relationships with the PACIE methodology processes (presence, scope, training, interaction, e-learning), aspects that allow the use of mobile devices for e-learning to be assessed. This text seeks to understand the gap between traditional education and teaching through the use of mobile devices, stimulate the sense of autonomous responsibility, support and strengthen curricular and extracurricular teaching-learning practices from several innovative scenarios and present innovation alternatives for improving the educational process based on the PACIE teaching-learning methodology.

For its part, the manuscript “*Social imaginaries about the use of technology and interpersonal relationships in university students through fiction films as a didactic resource*”, made by Julio Cuevas Romo, exposes the educational experience with undergraduate students in mathematics education, they participated in a film-debate cycle focused on science fiction and pos-



sible worlds. To consolidate and systematize the potential that cinema has in educational processes, the author makes a categorization regarding the educational objectives, based on the most common uses; so that through the contemplation of the movie *Her*, he analyzes the social imaginary of young people regarding the use-abuse of technology and explains how this impacts interpersonal relationships. Likewise, the writer considers that the social imaginary, which is detonated from fictional narratives such as cinema, serves as the basis for special educational interventions.

In this path of knowledge, the article “*Beyond the tablet, ¿an intermediate zone of learning?*”, Structured by María Isabel Miranda Orrego and Isaac David Grijalva Alvear, is presented. The authors intend to deepen the study of the child’s learning processes associated with the use of new technologies in the classroom, explaining that, according to national and international experimental and quasi-experimental studies, of the last decade, learning has become the increase and repetition of the content offered on the mobile device, omitting the experience of apprehending learning processes that allow the appropriation of knowledge. That is why the text seeks to answer questions such as: Does the tablet collaborate or break the act of apprehending? Is it relevant to consider the tablet as a mediator of learning processes? The answers to these questions come from a qualitative investigation, with a psychoanalytic theoretical framework. The results allow us to identify playing or ‘games without a rules’ as one of the central elements in the apprehension processes. The authors consider that children exceed the activity programmed by the software creating figures and shapes on the screen, and exploring numerical possibilities that allow them to think beyond the activity proposed on the tablet. Likewise, the researchers explain that while the teacher is a mediator who facilitates the learning processes, the tablet is a possible intermediary of knowledge and learning processes with technologies.

In the same vein of innovation in education, there is the article “*Potential for innovation and institutional management at the National University of Cañete - Perú*”, presented by Dulio Oseda Gago, Ruth Katherine Mendivel Gerónimo and Amanda Durán Carhuamaca. The authors have, as their starting point, the framework of the multiple political, economic, social and cultural transformations posed by the current Peruvian university system. They propose to generate mechanisms for the innovation of public universities in order to respond to the requirements of the National Superintendence of Higher University Education and the National System of Evaluation, Accreditation, and Certification of Educational Quality. The research aims to determine the relationship



between the potential for innovation and institutional management in the management, teaching and administrative staff of the National University of Cañete.

Along the same lines of educational innovation, the manuscript “*Transformational leadership from the perspective of humanist pedagogy*”, presented by Oscar Alfredo Rojas Carrasco, Amely Dolibeth Vivas Escalante, Katihuska Tahiri Mota Suárez and Jennifer Zurina Quiñonez Fuentes, is presented. This research aims to generate a theoretical approach to transformational leadership from the perspective of humanist pedagogy. They present the interpretation of experiences and knowledge on the subject in question and analyzes the axiological, ontological and teleological perspective of humanist leaders.

The categorical and reflexive journey of *Sophia* 28 closes with the document “*The Ecuadorian Crisis of aesthetic representation from the second half of the 20th century to the beginning of the 21st century*” structured by Pablo Eugenio Cabrera Zambrano. The work analyzes the characteristics of the aesthetic experiences of Ecuadorian art from the mid-20th century to the present. The author states that the foundations of contemporary art are found in the so-called ‘aesthetic samples’, typical of postmodernism and the neo-Marxist ideological trend conceptualism, whose validity is justified in Marcel Duchamp’s *ready-mades*. This article criticizes these aesthetic samples for several reasons, but especially for imposing itself in Ecuadorian art in a decontextualized and authoritarian way, denying the Andean art own traditions.

The ideas expressed in each line of the pages of this issue of *Sophia*, *Collection of Philosophy of Education* are not definitive or absolute, on the contrary, all of them constitute the starting point for the generation of new reflections, questions, reconstructions, and proposals.

Floralba del Rocío Aguilar Gordón
Jefferson Alexander Moreno Guaicha

Bibliography

AGUILAR, Floralba

- 2011 Reflexiones filosóficas sobre la tecnología y sus nuevos escenarios. *Sophia: Colección de Filosofía de la Educación*, (11), 123-174. doi: <https://doi.org/10.17163/soph.n11.2011.06>



- AGUILAR, Floralba, BOLAÑOS, Robert, MORENO, Jefferson & VILLAMAR, Jessica
2019 Diálogo de saberes en las ciencias humanas. *ArtyHum*, (64), 62-99. Recuperado de <https://bit.ly/37pCofi/>
- AREA, Manuel
2009 *Introducción a la tecnología educativa*. Recuperado de <https://bit.ly/2ZENuKS/>
- BALLADARES, Jorge, AVILÉS, Mauro & PÉREZ, Hamilton
2016 Del pensamiento complejo al pensamiento computacional: retos para la educación contemporánea. *Sophia, Colección de Filosofía de la Educación*, (21), 143-159. doi: <https://doi.org/10.17163/soph.n21.2016.06>
- BUNGE, Mario
1984 *La ciencia: su método y su filosofía*. Buenos Aires: Siglo Veinte.
- COBO, Cristóbal & MORAVEC, Jhon
2011 *Aprendizaje invisible: hacia una nueva ecología de la educación*. Barcelona: Transmedia XXI.
- ECHEVERRÍA, Javier
2005 *La revolución tecnocientífica*. Madrid: Instituto de Filosofía del CSIC.
- MONTESINOS, Jaime
2012 Guy Debord: el espectáculo, la mercancía y la inversión de la realidad. *Cuaderno de Materiales*, (24), 5-25.
- MORALES, Fernando
1998 *Globalización: conceptos, características y contradicciones*. San José: Escuela de Economía Agrícola de la Universidad de Costa Rica.



NEED OF TECHNOLOGY FROM METAPHYSICS AND ETHICS

La necesidad de la técnica desde la metafísica y la ética

JUAN CAMILO HERNÁNDEZ RODRÍGUEZ*

Independent researcher, Bogota, Colombia
lfl_jchernandezr540@ pedagogica.edu.co
Orcid Code: <http://orcid.org/0000-0001-6675-3636>.

JHONATAN PÉREZ BEDOYA**

Library Network, Bogota, Colombia
lfl_jperez988@ pedagogica.edu.co
Orcid Code: <https://orcid.org/0000-0002-8705-6642>

Abstract

Technology as a philosophical question has a double relevance: first one, insofar as it is considered as the essence of the human (only human being is a properly technological subject); the second one as it is considered as a vital function (although it arises in their heart, once created “no longer belongs to it”, it is transhuman). For this reason, the aim of present paper is to expose two philosophical conceptions on technological essence of human being: José Ortega and Gasset’s metaphysical conception and Hans Jonas bioethics conception. These positions will be analyzed from their respective problems: technology as a vital function, in the case of Ortega’s perspectivism; and in the case of Jonas bioethics technology as a possible cause of the destruction of the environment. Then, we will show the radical difference between them: while Ortega conceives technology as a vital function based on the concept of ‘well-being’, Jonas analyzes it from the concept of ‘necessity’ in an anthropological sense. The paper concludes explaining how, despite of these differences, both authors reach to the same conclusion: the technological exercise must summon to reflect anthropologically on the impact of the self-creations and the environment in to preserve quality of self-lives at the biological level (bio-ecology/bioethics).

Keywords

Technology, metaphysics, bioethics, basic needs, cultural welfare, ecology.

Suggested form of citing: Hernández, Juan & Pérez, Jhonatan (2020). Need of technology from Metaphysics and Ethics. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 43-66.

-
- * Bachelor of Philosophy, National Pedagogical University of Bogota, Colombia Recent publications: Metaphysical background of the concept of being of Sartre. *Universitas Philosophica*, 35 (71) (co-authored); Answers to the paradoxes about the omnipotence of God. *Pensamiento*, 75 (283); The Omoteotl: duality as a transcendental metaphysical foundation. *Perseitas*, 7 (2); Critical thinking’: a philosophical analysis of the concept. *Nullius in Scientia Magazine*, 2 (Suppl. 1).
- ** Bachelor in Philosophy, National Pedagogical University of Bogota, Colombia. Academic advisor and cultural promoter in the Library Network with the Ministry of Culture; teacher in community literacy projects for children and adults. Recent publication: Clash of paradigms: analysis of the prohibitions of Tamburini and Retz to various modern theses. *Notebooks of Latin American philosophy*, 39 (119) (co-authored).

Resumen

La pregunta filosófica por la técnica posee una doble importancia: en primer lugar, en cuanto se la considera como esencia de lo humano (solo el hombre es un sujeto propiamente técnico); y la segunda, en cuanto se la considera como función vital del mismo (si bien surge en el seno de este, una vez creada “ya no le pertenece”; es transhumana). Por ello, el objetivo del presente trabajo es investigar las concepciones filosóficas de la esencia técnica humana en la concepción metafísica José Ortega and Gasset y la concepción bioética de Hans Jonas. Se analizarán cada una de las posturas a partir de sus respectivos problemas: el de la técnica como función vital, en el caso del perspectivismo de Ortega y, en el caso de la bioética de Jonas, el problema de la técnica como posible causante de la destrucción del ambiente. Posteriormente, se mostrará la diferencia radical entre ambas posiciones: mientras Ortega concibe a la técnica como función vital fundamentada en el concepto de ‘bienestar’, Jonas la analiza a partir del concepto de ‘necesidad’ en un sentido antropológico. El texto finaliza explicando cómo, a pesar de estas diferencias, ambos autores llegan a la misma conclusión: el ejercicio técnico debe convocar antropológicamente a reflexionar sobre el impacto de las propias creaciones en el ambiente para preservar la calidad de las propias vidas a nivel biológico (bio-ecológico/bioética).

Palabras clave

Tecnología, metafísica, bioética, necesidades básicas, bienestar cultural, ecología.

44



Introduction

As can be seen in the work of Martin Heidegger (1997), *The Question Concerning Technology* is, in the end, a question of human essence. At the same time, he characterized the essence of technology as partially creative (“artistic,” he will say).¹ It is just a matter of looking at different situations in the contemporary world to reaffirm Heidegger’s thesis: globalization, education, wars, information flow, entertainment, professionalization, advertising, political campaigns, etc. they are currently strongly influenced by technology in such a way that pretending to give it up would not only be nonsense but something simply impossible.

Based on this provocative Heidegger thesis, various philosophers have questioned what it would consist of, how will it manifest and what implications that “human technological essence” has. Next, two interpretations are outlined: that of José Ortega and Gasset and that of Hans Jonas. It will be shown that, while the former understands the technological essence as a necessary condition for human well-being and performs its analysis based on metaphysical concerns, the latter understands it as a need for survival from bioethics. These positions assume contrary theses and, nevertheless, have a common purpose: to offer a perspective on the question: what is man? that is, they aspire to make a contribution in the field of philosophical anthropology. Roughly speaking, the dilemma is as follows: understanding the technological essence as a need for well-being

has greater explanatory power in existential and vitalistic terms since it reconciles technology with human freedom. On the other hand, thinking about technology based on the need for anthropological survival allows us to see what the real implications of the technological work of man are in the environment and, therefore, in himself as a species.

However, after the exposition of both theories, some questions will be made that can be formulated both to complement their contributions and to refute them. Finally, it will be shown how, although the paradigm from which each author analyzes technology as a human essence is different, they conclude in a common aspect: they recognize the imperative — bio-ecological, in Ortega; bioethics, in Jonas — of preservation of the environment as a necessary condition for the preservation of the essence and, above all, of the existence of the human being.



José Ortega and Gasset: technology as well-being, a necessity?

The problem: essence or need?

Taking into account Heidegger's (1997) thesis - "technology is essential to man" (p. 113) -, it would seem coherent to affirm that technology is necessary and, therefore, unavoidable to man. Their relationship is, therefore, not free, but of necessity: 'every essence is, by force, necessary'; denying it would imply rejecting the identity principle (something absurd). However, reducing technology to an exercise of mere survival and adaptation would detract from all the creative and voluntary value that it implies. Therefore, Heidegger himself (1997) argues that: "Free is the relationship when our being-there [*dasein*] opens to the essence of technology" (p. 113). Hence, the relationship with technology modifies our perception of the world and, with it, what we consider to be true or accurate (Merchán, 2011, p. 57). Then, if someone affirms that technology is the essence of the human, then they should commit to it being necessary and, therefore, not free; on the other hand, if it is maintained that it is free and voluntary, either the principle of identity would have to be renounced when recognizing contingent essences, or accept that, given its contingency, it is not essential to mankind. It can be seen below how the Spanish philosopher José Ortega and Gasset solves this apparent paradox:

The conditions of need: a quo and ad quem

If the question of technology² were considered in a transcendental way, it should be: What are the necessary conditions that enable (*conditionis sine quibus non*) and require the emergence of technology? For this, Ortega and Gasset in *Meditations on technology* finds two initial conditions: first, a *quo* (from...): nature, the world or circumstances; and second, the *ad quem* (towards which...): man's vital desire to deploy his technological faculties in the world. It could be said, for the sake of the clarity of the theory, that the *a quo* conditions are the given conditions or, rather, those that correspond to existence (*dasein*)³: what is there (the context) or "the objective description of a fact (technological)" (Aguilar, 2011, p. 130). Therefore, they are extrinsic to the individual⁴. On the other hand, the *ad quem* conditions refer to the intrinsic qualities or potentiality of the subject to practice technology on the environment that surrounds it or, if desired (although in a very broad sense), "the subjective assessment of a fact (technological)" (Aguilar, 2011, p. 130). In this sense, two different needs can be distinguished: *ad intra* (inside the subject) and *ad extra* (outside it)⁵.

Regarding the first element (*a quo*), Ortega is incessantly obliged to oppose the "reductionist naturalism" of technology. According to him, technology is reduced to the solution that man makes to solve the adversity of his circumstances and simply seeks through it - technology - to survive.⁶ Although Ortega and Gasset admits that clinging to survival ('surviving') is the starting point that makes technology possible, this is not the real cause, it is, rather, well-being (pp. 322-328). Technology not only arises from an eagerness of man to be in the world, but its purpose is to be well in it.

If survival were the only cause of technology, animals would also be technological subjects, because, like humans, they have a survival instinct. However, animals just have to survive; while men don't: they always look for better well-being conditions. Even, as Ortega says, on some occasions man may prefer to cancel his existence (commit suicide) for maintaining this state of well-being; because 'living' is not reducible to 'being in the world' (existing), but denotes a degree of appropriation (of 'earning') of its own existence. As Ortega and Gasset (1964) states:

We would say, then, that man is given the abstract possibility of existing; but it is not given reality. This he has to conquer, minute after minute: man, not only economically, but metaphysically, has to earn a living (p. 337).



Hence it is important to rescue the differentiation between ‘existence’ and ‘reality’ (taking the latter as a purely human construct).⁷ The human condition is distinguished from the animal one in that the former manages to make sense of its existence from the desire to live (as will be shown below). Based on this desire to live, man constantly strives to ‘earn’ (‘appropriate’ authentically) his existence (p. 323). This appropriation occurs in the transformation of nature (p. 324); says Ortega (1964): “Technology is the opposite of the adaptation of the subject to the environment since it is the adaptation of the environment to the subject” (p. 326). This is precisely why the position of “reductionist naturalism” is unsatisfactory to explain technology: it only manages to see it as a product, as something derived from human action; when, as Ortega shows, technology is something essential and constitutive of man. That is why it seems legitimate to affirm that man constitutes technology (as long as he creates it) and technology constitutes the man (while it is his essence) $\forall x \forall y \{[(Tx \rightarrow Hx) \wedge (Hy \rightarrow Ty)] \rightarrow (x \leftrightarrow y)\}$.⁸

To summarize the foregoing: contextual conditions (*a quo*)—that is, extrinsic conditions to the individual— start from the fact that nature requires man to develop tools that allow him to survive. However, these are not only reduced to survival needs but are mainly based on the fact that man wants to stay in a state of well-being. Therefore, it is valid to affirm that the state of well-being is more ‘comprehensive’ than that of survival. Everything that is done to survive is done looking for well-being, but not everything that is done looking for well-being is because one wants to survive (for example, the case of suicide or euthanasia).

Every act of survival seeks well-being $\forall x(Sx \rightarrow Bx)$, but an act of well-being may not have the purpose of survival $\sim \Box \forall x(Bx \rightarrow Sx) \rightarrow \Box \exists y: (By \wedge \sim Sy)$.⁹ Thus, it is possible to conceive the creation of technological objects that threaten human life and, in the same way, it is possible that well-being threatens existence. We create dams, factories and other objects that threaten the environment. This can go against survival since such contamination can shorten one own’s time of existence and of the species. However, even so, the human being does it because he prefers to enjoy greater comforts over the simple fact of existing.

On the other hand, regarding the second element (*ad quem*), Ortega and Gasset (1964) considers the explanation that technology is a product of a survival instinct to be insufficient, since the concept of ‘instinct’ is not entirely clear and, assuming it was, instincts are subsumed by reason and will. Thus, he chooses to replace it with the concept of ‘desire to

live'.¹⁰ When it is said that the 'subject is technological' it is usually attributed (not without vain reason) that it is because it 'needs to meet certain needs', that is, for survival. However, Ortega recognizes that man does not necessarily have to replace them: he can decide whether or not he wants to be well; moreover, he can decide to live or not do it (commit suicide/ let yourself die). In other words, by itself, technology is not something necessary in man, but it is when the desire to live is assumed as a premise, especially, to live well.

Perhaps the statement above seems suspicious to the reader. On the one hand, Ortega (1964) states that technology is essential to man: "There is no man without technology" (p. 332); nevertheless, the author affirms that it is not absolutely necessary for man to display this essence, but that it is a voluntary act. So: Is technology necessary or not? Can something be essential and not necessary? If it is essential and necessary, what kind of need is it? It is necessary to make a clarification here: it is said that by itself technology, well-being, and survival are not necessarily facts, because a man can, perfectly, decide to let himself die. However, if the desire to live is accepted, then, necessarily technology must emerge, arise. This is called the distinction between 'necessary by itself' and 'necessary by another' or 'under an assumption'.¹¹ An example of this is that 'it is not necessary for the reader to finish reading this text completely': $\sim \ddot{y}P$; It may be the case that you interrupt your reading and devote yourself to another matter. However, 'if what you want is to finish reading it, then it is necessary for you to complete the reading route through all the sections': $\ddot{y}(P \rightarrow Q)$. Similarly, it is not necessary that man desires to live and, therefore, makes technology; but if he wants to live that is, remain in a state of well-being, then he needs to make it.

Proposal: the repertoire of needs

Following this order of ideas, technology is essential but irreducible to man. It is a vital product, but transhuman; hence, it will last over time and become an 'object in the world'. This is explained by Ferrater Mora (1975), linking it with the characteristic perspectivism of Ortega's philosophy:

The subject is a screen that selects the prints or the given. It is not an abstract being, but a concrete reality that lives here and now. It is, therefore, a life. Such a life is not only biological; the defense of the vital, in which Ortega insists stubbornly, does not amount to the defense of the primitive. While culture is produced by life and for life - and, therefore, life is prior to culture - it does not mean that cultural values are secrete-



tions of vital activities and even less merely biological. It means that cultural values are vital functions, although vital functions that obey objective laws, and that, consequently, there is complete continuity between the vital and the transvital or cultural. As a consequence of this, it can be affirmed that the reason is not out of life nor is it life, but a function of life (pp. 347-348).

Taking into account that the type of need of the desire to live — and, therefore, of technology— is conditional, this opens an infinite field of possibilities of responses or projections (functions) regarding on how that desire manifest life through technology ($\forall x[\forall x \rightarrow (\Phi x \vee \Psi x \dots)]$). This is called by Ortega (1964) as a “repertoire of needs” (p. 330). This repertoire is nothing more than the synthesis of all possible functions or possibilities of technological manifestation of that vital desire to preserve well-being. It is, therefore, a nucleus from which all possible projections of the vital function of technology emerge.¹² Now, being consistent with his opposition to ‘reductionist naturalism’ — previously described in his explanation of technology by a mechanistic instinct—, Ortega (1964) also finds untenable that position in which it is claimed that this field of possibilities for the deployment of ‘being in the world’ of man is not changing. He says:

As the repertoire of human needs is a function of it, these are no less variable, and as technology is the repertoire of provoked acts, provoked by and inspired by the system of those needs, it will also be a proteiform reality, in constant mutation (p. 330).

If the world or nature changes, then the possibilities of development also change. It is inconsistent to think of a repertoire of needs that is absolute; If reality is in perpetual construction, how can we say that technology is a ‘something already finished’? Ortega says (1964):

As the repertoire of human needs is a function of it, these are no less variable, and as technology is the repertoire of provoked acts, provoked by and inspired by the system of those needs, it will also be a proteiform reality, in constant mutation (p. 332).

The repertoire of needs may be explained with the following figure:



Figure 1
Explanation of the infinite projective relationships
from the repertoire of needs



Source: The authors

The repertoire of needs is explained as follows: throughout life our needs are endless, some of them are never met. Take any need (x), for example, to obtain food. From that need, infinite possibilities of a solution to that need are deployed through technology (a: hunt another animal, b: plant a crop, c: domesticate and raise an animal, d: be nomadic and constantly search for food, e: synthetically create new food, etc.). Moreover, each form of technological solution of the needs (a, b, c...) has infinite specific forms of solution (for example, in a, hunting a mammal, a reptile, a bird, etc.) and each one of those forms can be developed in turn in other infinite specific forms, etc. Thus, there seem to be at least three projections ad infinitum: first, the needs; second, the technological solutions; third, the specific ways by which such solutions can be carried out. In turn, there seem to be infinite possibilities contained within others ('meta-infinites'). Each need contains within itself an infinite number of possibilities of solution through technological acts. In turn, each technological act has infinite possibilities of being developed, and so on. From the above, Ortega (1964) offers a precise definition of this concept of 'technological act':

Technological acts, we said, are not those in which man seeks to satisfy directly the needs that the circumstance or nature makes him feel, but precisely those that lead to reform that circumstance, eliminating those

needs as much as possible, suppressing or diminishing chance and the effort required to satisfy them (p. 326).

With this, Ortega visualizes an interesting aspect: if technology seeks well-being, then, technology can also have the purpose of suppressing other needs—which, in turn, potentially contains the development of other technologies—; thus, paradoxically, the effective development of one technology may deny the possibility of the development of others. An example of this may be cell phones: a single technological object that was designed to solve the need for communication may supply the need to access entertainment, information, calculator, clock, compass, etc.

Thus, there is a risk that the move towards a great technology—that is, a great technological object that solves all needs—will end up denying that projective development of that technological essence of man and at that time, given that man already has created a technology that solves all his needs, man would not need more of technology (which would imply that man would cease to be a man, insofar as he ceases to be a technological being).¹³ This could be, then, the great metaphysical paradox of man as being essentially technological: the more he exerts his development as a technological subject, the more he denies his needs and, thus, the more he approaches the situation in which at a certain point he no longer needs technology. The deployment of its essence is what in the future could make it impossible for him to continue doing it since he would no longer need to continue performing such an act.

Before concluding this analysis of Ortega's philosophy, it is necessary to resume what has been said: first, technology arises from man's need for well-being and this does not necessarily imply survival, but could even deny life; second, technology also arises from the "desire to live", then it is a voluntary act and not necessary per se; its need lies in the fact that, if you want to live well, then the development of technology is necessary; and third, due to the repertoire of needs, infinite possibilities of the technological act are projected, which, in turn, tends to gradually and exponentially deny the emergence of future needs; then, it is possible to think that in the future the technological act itself is the one who denies the possibility of developing. Thus, in the analysis, three of the conditions (transcendental) can be recognized: a) well-being, b) the desire to live and c) the repertoire of needs.



Hans Jonas: two needs for a new ethic

However, once explained the position of Ortega and Gasset, this section aims to show the temporal relationship imprinted in the ethics, that, so far, have taken place in the thought of Hans Jonas and his thesis of the pressing need of the times of acquiring new ethics. First, the need for a new ethic in the field of the effects of human activity on nature will be presented. Secondly, this need will be shown in the field of human intervention as an object of technology. Finally, the consequences and commitments that arise from this need will be stated in ethical terms for Jonas.

Natural need: survival

52



In 2010, a 6.9 magnitude earthquake hit the Tibetan city of Yushu in Qinghai province. The aforementioned earthquake took the lives of 1,944 people and injured more than 10,000. There are compelling reasons to suppose that the main cause of this earthquake or at least of its unexpected strength, was the construction of a monumental technological feat: The Three Gorges Dam. Among other things, the concrete giant caused the creation of artificial lakes whose additional pressure on the surface seems to have influenced the balance of the cracks in the subsoil and thus contributed to the geological shock.¹⁴

In this way, something as natural as an earthquake is likely to be included in the field of phenomena influenced by human activity. It is no longer a simple interactive relationship between man and nature. Now it is affirmed, with evidence in hand, that humanity is a force of nature in a geological sense. In other words, to say that the human —by his technological capacity, number, technological imagination, etc.— has become a geological agent of the planet means that it is capable of affecting the very balance of life on Earth.

In this way, a new geological era has begun, baptized by some scientists such as the Anthropocene. For the first time in history the human mass is constituted collectively and, therefore, is left to the responsibility of itself: the way of future survival will depend, then, on the maturity of the collective reason, according to Chakraparty (2009). The technological power is —in the modern sense— the engine of a new era and the dawn of the Anthropocene.

The basic premise of this section is simple: at least one natural need —in terms of species— can be traced to an ethic of the future in this example. Unlike nuclear war, which would be the result of a conscious decision by a particular agent, the modification of the Earth's ba-

lance as habitat is an unintended consequence of technological action and shows the effects of human beings' actions as a technological species. This imminent threat to the very existence of humanity creates a new sense of "we" that truly encompasses each and every individual.

A pressing need and extreme panorama for a high-caliber ethical reflection. Hans Jonas, first involved in this reflection, was able to capture the insufficiency of previous ethics in the face of the new dimensions, powers, and limits of human action in the technological field. For the latter, it would be necessary to address at least three aspects of any ethics in the current circumstances: first, the object of ethics, that is, to whom it is directed; second, the depth of the effort or the scope of its regulations; finally, the temporal scope of the assumed responsibility.

From these three points, Jonas will examine the temporal nature of the previous ethics. Jonas's proposal (1995) can be stated, then, as follows: "The new classes and dimensions of human action demand a new ethic of foresight and responsibility adjusted to those, ethics as new as the circumstances to the ones we face" (p. 48). The great challenges of this ethic are immediately posed by technology, by human action and its powerful magnitude of planetary reach. The power of technology over the destiny of man has exceeded the power of all existing ethics.



Previous forms of 'future-oriented ethics'

Among the traits of the inadequacy of these ethics is its temporary character, oriented towards the immediate present "as ethics oriented towards contemporaries" (Jonas, 1995, p. 42). The author's concern is evident: it is not about ethics as actions oriented to immediate action, but rather that human survival depends on our efforts to care for the planet, its future and the possible life that inhabits it or will inhabit it.

The future, although formulated in previous ethics, suffers from another fundamental evil: it remains anchored to the present and has no foresight. In the case of the 'ethic of consummation in the hereafter' (befitting of the believer), there is a future that guides the entire practical dimension of actions. However, this future is ultramundane. The action is presented in the form of atonement, a preparation for a life pleasing to God and his qualification.¹⁵ This metaphysical commitment represents the renunciation of the earthly, the mundane, the sensitive and the pleasures. For Jonas (1995), resignation is precisely the condition from which salvation is given: its character would be that of a transaction whose primary purpose is the immense gain of the post-mortem prize (p. 43).

This logic displaces precisely the entire ethical universe. The cornerstones of ethical thinking —deliberation, judgment, decision, the causal connection between the action and its outcome— are abandoned; they fall on an ultramundane foundation that always articulates the actions of the believer.

According to Jonas (1995), in this ethic, the path of purification constitutes in itself the ‘best’ way of life. This ethic remains anchored to the present by the earthly disposition of private purification through immediate actions (if we are allowed the poetic license, to ‘earn paradise every day’). Thus, its object is nothing but the individual, its scope is only the community of believers and the spectrum of responsibility assumed is reduced to the post-mortem prize (undoubtedly, alien to society as a whole). Given its private nature, Jonas (1995) considers that this ethic becomes “selfish and individualistic” (p. 44).

The political promise in the figure of the ruler does not enjoy better tools for the theoretical challenge of an ethic for the future. This future in the form of a promise only includes the present intervention of the ruler according to “the duration of his work and not the prior planning of something that will only become a reality for future men and that is unattainable for the contemporaries” (Jonas, 1995, p.44). On the one hand, it is based on the real, immediate, current foresight of the present that could be extended in the near future. However, the future is but an extension of the present. Its anchorage to the present is reduced to the ability of the ruler to overcome the contingencies of fortune.¹⁶

It is, then, in other words, “to establish a viable political form and the proof of its viability would be as far as possible in the duration of the created” (p. 45), that is, its present character would be based on the fact that whatever the order of political things, it would be included in the best possible order, whose configuration would include the wisdom and work of the ruler in the present. Simple equation: the present that is preserved as the best possible state of affairs is equal to a mere extension of a similar future as an effect. The object of this modern political promise is the ruler; its scope and effects, the mass of governed; and the temporal extent of his responsibility, the duration of the ruler’s work.

In the case of the utopian ethics of Marxist thought, Jonas (1995) argues that it is a ‘dynamic eschatology of history’. In other words, the ultimate destiny of the human being as a socio-historical subject. This ethic intends to positively establish from the actions said destiny, not the preparation of the path —as occurs in the ethics of consummation—but of the active commitment in making it possible. Jonas (1995) will indicate,



then, that only with the modern idea of progress “arises the possibility of conceiving any previous step towards the current and everything current as a previous step towards the future” (p. 47). Establishing the future order now presupposes having an idea of what it is. Progress is presented as a black hole because this idea turns the above into a medium: it strips it of its value, it becomes a vehicle for what is to come, it makes the facts appear as provisional germs of utopia. Ultimately, the promise of a better future order mobilizes the action.

However, the action is oriented towards a future that “neither the agent, nor the victim, nor the rest of the contemporaries will get enjoy” (Jonas, 1995, p. 48). These actions are oriented towards the future, mobilized by the historical force in a feeling of temporary and effective abolition that, through actions, would push us towards the final destination. Consequently, it is an ethic of the transition of the coming order. It is utopian, as it presupposes a destiny of history as a goal. At this point, Jonas does not make it clear what the purpose of such ethics would be, the scope of its regulations or the extent of the assumed temporary responsibility. The question is: How would these ethics address the overwhelming power of technology in human action? How would they respond to future challenges? These questions become more complex when one of their main premises (man) no longer has consistency or a fixed nature and becomes an object of technology.¹⁷

The most ominous of interventions is that of the art of *homo faber*, who turns his potential on himself in order to remake, modify, give himself wings. Never in history did ethical thinking has faced what was assumed from the beginning as a premise: the constant nature of human nature. This field of current plasticity of the human appears as a mobile background difficult to grasp in three dimensions: mortality, behavior control and genetic manipulation (Jonas, 1995, p. 49).

Anthropological necessity: the place of man with respect to technology

The World Transhumanist Association, founded in 1998 by Nick Bostrom and David Pearce, has set itself the task of addressing these problems. Describe ‘transhumanism’ as follows:

Transhumanists defend the moral right of those who wish to use technology to expand their mental and physical abilities and to improve their control over their own lives. We seek personal growth beyond our current biological limitations (Bailey, 2017, § 4).



Its basic premise is that human development, in evolutionary terms, has not reached anything like an endpoint: all kinds of technologies on the rise —neuropharmacology, artificial intelligence, cybernetics, and nanotechnologies— have the potential to improve human capabilities.¹⁸

Among these technologies, for Jonas (1995), there is the possibility of “counteracting the biochemical processes of aging to indefinitely prolong human existence” (p. 50). This implies, as can be inferred, that death disappears from the human spectrum as a natural necessity. Death becomes, rather, an organic failure that can be modified, postponed and disposable avoiding its annoying consequences and its substitute anguish. Who should prescribe such a Faustic sin? Who will distribute the blessing? To what extent is it desirable? These speculative fantasies of immortality surpass the obvious question of death as a necessary biological step. The consequences of suppressing death, for Jonas, are clear: it would mean eliminating procreation, living locked in a world of old people suppressed from astonishment, suppressing the privilege of contemplating the world with new eyes, suppressing curiosity.¹⁹ Nothing could happen just once, nothing would be preciously precarious. For Jonas (1995), “death (or its allusion) makes men precious and pathetic” (p. 51). These are moved by their condition of ghosts, each act they perform may be the last. There is no face that is not about to blur like the face of a dream. It could be that what appears as a gift — the gift of immortality — is nothing more than a curse. And so, given the seriousness of the matter, it is impossible to get carried away by its consequences or by the calculation of interests. What is necessary is an ethical reflection of these consequences.

The other field that has crossed the hitherto unmovable border of the human is the modification of behavior through technology. The specific questions that arouse the concern of Jonas (1995) are about the validity of intervening behavior to induce attitudes.²⁰ How — under what premises and with what right — can it transgress the individual’s status as an ethically autonomous agent? The strategy is always the same: an invention is presented first as a brilliant remedy for some strenuous disease —so that no one can object— and then extends to other fields. The risk? Cross the medical frontier and settle on the plane of social manipulation, putting the capacity for social manipulation above the value of individual autonomy (p. 53). The latter entails — as was the case with Ortega— the redefinition of a new type of man and his commitment to the future.

Finally, the last field of technology applied to man is presented: genetics. Rather, the genetic control of future men. In this field, it is indicated that man takes the reins of his own evolution not only in order to



preserve himself but to improve his own design. The questions of Jonas (1995) appear:

Are we qualified for such a creative role? What sculptors, what models, from what knowledge is based? These questions only show the way in which the capacity and power of technological action overflow all ethics that have existed until now (p. 54).

This last axis is the major signal for the ethics of responsibility. Man has gradually ceased to be a fixed object —biologically and physically constituted— and becomes an axis of continuous transformation, a plastic platform for technological intervention.

Reflections on both theories

57



Now, in order to broaden the understanding of these positions, some questions will be raised regarding these theories. These questions are elaborated from areas and theories within which these theories are framed, since it would be unfair and, possibly, irrelevant, to carry them out from external contexts from which they were conceived. Subsequently, and by way of conclusion, it will be shown how, although both theories have diametrically opposite conceptions about what technology is, they have common aspects.

Implications of technology as a vital function of Ortega

Two great questions can be formulated for the theoretical proposal of José Ortega and Gasset. First, if the role of technology is to facilitate life and avoid discomfort and efforts, are we dependent on our own works or, precisely, as is deduced from Ortega's discourse, the possibility of re-affirming freedom and human power (potential)? If technology guarantees our freedom, why does the human being tend to become dependent on it? Can we freely choose to be dependent on our technological creations?²¹ If the freedom of man lies in the creation and not in the use of technological objects, can there be partial freedom?

It seems that in the exercise of the vital function of technology man gives himself or receives technology as beneficiary (Dust, 1993). However, it seems that the main means by which man exercises his freedom is, in turn, the cause of his eventual loss of freedom. The dialectic between affirmation and denial of this vital function increasingly loses its balance and tends to some independence from technology of man. Then,

will there be a state in which man loses his freedom of creation by having nothing new to invent?

On the other hand, this same paradox can be approached from a different angle and perspective: Is it possible that technology denies itself from the cancellation of future needs? If this is so, how true was it that the 'repertoire of needs is infinite'? Can man create technology without having to do them (that is, for leisure)? Why is it said that the possibilities that man has to perform his technological act are endless: by the means that man has or by the faculties (such as imagination)? Can an infinite function (the faculties of creation) be denied by another, in turn, infinite function (the projections or manifestations of these faculties)?

It is clear that, rather than answers, these questions call for further inquiries in this regard. However, they seem to be serious problems that, in the metaphysical field, someone who wishes to defend Ortega's thesis must overcome.

58



About Jonas and consequences

On the other hand, we have the questions to Jonas (1995). Alan Weissman's successful book (2007), *The World Without Us*, suggests an interesting mental experiment to live the present:

Suppose the worst has happened. Human extinction is an accomplished fact [...]. We are facing the image of a world in which we would all have suddenly disappeared. Is there, at least, a weak footprint of ours that will last in the universe? (p. 10).

It may be an exaggeration to ask such a thing, however, technology has turned mental experiments and speculative flirtations into achievable, materially possible projects at your fingertips. Therefore, the only things that are visible are its extreme conditions, the remote effects, seen as an automatic operation that requires, by itself, something that we have renounced, according to Jonas (1995), "absolute values and objective truth" (P. 54).

For the author, the representative government—due to its blindness to the foresight and its anchorage to the present interests—lacks an ethical basis to regulate the actions. It cannot fit into any future attitude of those who come, a current decision that would redeem the past in a balanced order for the future. No. For the moment, Jonas invites to base an ethical theory on the edge of needs, with a solid system, absolute values and objectively arranged so that, from there, the mandates and pro-

hibitions of the future are possible. What forces will shape these norms; what ethical background will give value to that future?

For Jonas (1995) ethics exists precisely “to order the actions of men and regulate their power” (p. 58). Again, the need for ethics as a regulator of the power of human actions is evoked —by the inseparable hand of technology that is inherent to it—. The equation becomes transparent: more power of action implies a greater spectrum of regulation at what it should regulate. In other words, the capacities of action that we have mentioned “require new technological rules and, perhaps even new ethics” (p. 59) in the face of the power to act there should be rules, the prohibition, the mandate. First, the capacity for action then the regulation. The technological capabilities —within the technological dimension— characteristic of human existence and its consequences are nothing but violence exerted on ethical thinking, novel pressure and theoretical challenge.

Given the snowball effect of the technological action, whose exacerbated power we have seen, the regulatory norms, their foundation and, in this same movement, the value of nature and of man were neutralized (presented in this text as fields of specific need for ethics). Faced with the inconceivable power given by technology, only comparable with the literary imagination comes an excessive emptiness. And with the emptiness, ignorance, and fear about the power and impact we possess. For Jonas (1995), fear and moralism are the first predictable feelings that cloud the wisdom necessary to give seriousness to the matter.

Faced with the possible consequences of the ‘explosive’ technological action, we get fear. Fear that, in any case, it is anchored to the present, but that can no longer refer to the past, to the sacred, which in other times provided comfort and future hopes. It is not that there is some kind of return to a previous era, where we get rid of the technological excess, where we only manufactured pulleys or supplied energy with coal. It is not possible to return to it; the excess is with us forever. In the end, does not Jonas himself fall into the error that criticizes Marxism —which understands the human being as something fixed—, believing that nature is a fixed, candid and harmonious plane of human intervention? On the other hand, is it realistic to propose an ethic for the future by isolating the engine that gives rise to the exacerbated technological production, that is: the economy and social and political factors?



Conclusions

As clarified in the previous section, raising criticism of both positions from contexts and areas outside the theory would be unfair and futile. The concerns and analysis criteria of both authors are clearly different: while Ortega speaks from a vitalist metaphysics and a perspectivist epistemology, Jonas makes his reflections from bioethics and with a proposal of ethics of the future. Therefore, it is understandable that, while Ortega maintains that man is a substance with a repertoire of needs from which infinite functions of technological acts are projected, Jonas affirms that the essence of man is plastic and is in perpetual transformation. Similarly, their positions are positioned at opposite poles with respect to the characterization of technology: Ortega denies that technology is caused by the need for survival and states that it is due to the need for well-being; Jonas, on the other hand, maintains that the need for survival is the genuine cause of technology since it is a necessary condition of all future well-being (without survival there can be no well-being).

However, we can find two possible alternatives that, as a suggestion to the reader, could solve the apparent dilemma. While Ortega argues that the purpose of technology is well-being, this should not necessarily be understood as the destruction of nature. This can be glimpsed in the famous phrase of Ortega (1964): “I am me and my circumstance and if I don’t save it, I don’t save myself” (p. 322). As we indicated earlier, with Ferrater Mora’s explanation, Ortega does not hold a subjectivism, much less solipsism. Without a *quo* condition, there can be no conditions *ad quem*. Rather, we should understand well-being from a conception that the first vital function is the affirmation of all other possibilities or vital functions, that is: survival itself. Not all technological actions of well-being are survival, but survival is a set of acts that tend to well-being. Then, following Alonso (2018), Orteguian philosophy is radically ecological.

In this order of ideas, it is concluded that, whether the technological need is understood as survival or as well-being, both lead to bioethics in which the preservation and care of the environment are proposed as a necessary condition of good living of the human race.

Notes

1. Understanding ‘creator’ in this case in the sense of the Greek *ποίησις* and not as *creatio ex nihilo* (אֶרָב [bârâ]). The creation discussed here is not absolute (Brown et al., 1906, voice אֶרָב), but rather refers to a transformation of matter from one state to another



- (as is the case with the stone that, after the intervention of the artist, becomes a sculpture) (Lydell and Scott, 1996, voice ποιησις) (cf. Hernández and Pérez, 2018, p. 51).
2. It is often said that a question is transcendental when investigating the conditions of the possibility of something. This is defined by Kant (2011): “Not all prior knowledge should be called transcendental, but only that by which we know that (and how) certain representations (intuitions or concepts) only apply a priori or only a priori is possible (that is, the possibility of knowing or using it a priori)” (A56 / B80).
 3. Understood as a separable verb („Er ist auf der Welt da“ [“he is in the world”]) (cf. Weibl and Herndina, 1997, voice *dasein*) and not as a noun *dasein* (“existence”) or as the assigned hypostasis to a subject (*dasein*) (“the existing one”), created by Heidegger (2014).
 4. ‘Existence’ is a classic concept of metaphysics. In its original sense, the concept comes from a construct (ex-sistere) that means “to be outside of...”, “to emerge”, “to appear” (Lewis et al., 1956) (cf. Hernández and Pérez, 2018, pp. 51-57).
 5. A similar distinction can be found in Hernández (2019) to refute the paradoxes about the omnipotence of God (pp. 475 ss.). The distinction illustrates the difference between an optional or a priori need and one of a posteriori hypothetical action.
 6. This term (reductionist naturalism) is not used by Ortega, however, it summarizes well the approach of his criticisms. Examples of this vision are Herskovits (2011), Küng (1999), Potter (1998) and Morin (2006), or as we will see later, Hans Jonas (1995). For more information about the Orteguian overcoming of naturalism, see Conill (2012).
 7. Perhaps here are visions of Heidegger’s metaphysical concept of ‘authentic existence’ (Heidegger, 2014, §§ 48 ss.). However, it is necessary to clarify that the existence (understood as the a priori conditions of any action, fact or state, independent of any cognitive subject) cannot be authentic or inauthentic. Only reality can be valued as it’s own or improper, adequate or inadequate, genuine or false. Existence is that independent of every observer (the Greek τὸ ὄν); the reality, the appropriation or recognition that a subject makes of this (the φάερον) (cf. Hernández and Baracaldo, 2018, pp. 334 ss.).
 8. Read: “If not for all x that that x is the well-being and that x is survival, then it is possible that there is such and that that y is the well-being and that and is no survival.” In other words, given that not everything that is done for well-being is for survival, it is possible that there is a fact that is not for survival, but for welfare.
 9. Here it is possible to find a special connection between this central concept of Ortega’s (‘well-being’) and Nietzsche’s (2006) concept of ‘will to power’ (wille zur macht) for two reasons: first, because this desire is characterized as essential and irreducible element of the human condition, and second, because the concept ‘life’ is not reduced to ‘existence’, but has a deeper meaning: the appropriation of that same existence by that will (desire) to live (§ § 633-652).
 10. “As for the Being Necessary, it is either necessary in itself or not necessary in itself. The one that is necessary in itself is the one that is the cause of its own essence, not because of some other, whatever it may be, since the hypothesis of its non-existence would imply a contradiction. As for the necessary being that is not by itself, it is the one that becomes necessary for something other than him that is added; for example, four is necessary not by itself, but as long as two and two are aggregated; combustion is not necessary in itself, but as soon as the contest of active power by nature is assumed, that is, what it burns and what is burned”(Avicenna, 1950, § 14;



cf. Avicenna, 1980, pp. 24-37; Aristotle, 2014, c. 5, 1015a, pp. 20-35; Aquinas, 1951, q. 82, a. 1, sol.).

11. Keep in mind that this set of functions (projections) of the vital act of technology is closely linked to the ideal of life or vital project of the man that one wishes to be: "For Ortega it is not possible to separate the idea of a personal project from the development of technology. The man is technological. Technology is the realization of human projects. However, not all human projects are the same [...]. This step is essential. Because a connection between the human project and the development of the whole technology is determined. This equation is perfect. Man thinks of a world in which to live and realizes that he can do it through technology. For this reason, it is essential to understand what kind of man we want to be. The bodhisattva, the gentleman and the gentleman are not the same type of man" (Piro, 2013, pp. 53-54).
12. This risk is quite close to the risk that Heidegger (1997) spoke about: "You want, as they say, 'to have in your spiritual hand technology'. One wants to dominate it. Wanting to dominate it becomes all the more urgent, the more technology threatens to escape the control of man" (p. 115). In this case, the loss of control of technology may be due to the fact that, thanks to its transhuman or functional nature, the same technology is supplying all the needs and disregarding future technological acts and even the creative exercise of man.
13. "Its maximum capacity holds water at 91 meters above the level of the river itself and contains approximately 39.3 billion cubic meters of water in an area of 632 square km. We are talking about an approximate weight of 42 billion tons concentrated to a very small extent - in planetary terms - enough to alter the land course" (Chakraparty, 2009, p. 207).
14. On this, St. Augustine (1958) writes: "The soul must be purified, so that it can contemplate that light and adhere to it after contemplation. We can consider this purification as true walk and navigation towards the country because we do not approach that which is present in all places by bodily movements but by goodwill and good customs" (p. 10).
15. "It is found to keep them more or less in difficulty depending on whether the one who acquires them is more or less virtuous. And since this event of becoming a ruler, in particular, presupposes either virtue or luck, it seems that one or the other of these things partially mitigates many difficulties: however, he who has relied less on luck has remained more" (Machiavelli, 1990, p. 71).
16. All these ethics tacitly share three premises: "I) The human condition, resulting from the nature of man and things, remains fundamentally fixed once and for all; II) On that basis it is possible to determine clearly and without difficulties the human good; III) The scope of human action and, therefore, of human responsibility is strictly limited" (Jonas, 1995, p. 9).
17. "A few years ago, the discussion typically revolved around the question: 'is this science fiction'? Are we talking about real future possibilities? 'Now discussions tend to start from the position that yes, it will be increasingly possible to modify human capabilities. The question now is whether we should do it. And if the answer is positive, what are the ethical limitations?" (Sutherland, 2009).
18. In a more pessimistic tone says Borges (1974): "Dilating the lives of men would be to dilate their agony and multiply the number of their deaths" (p. 533).
19. "Should we overcome aggressiveness by electronically pacifying certain brain regions? Should we provoke feelings of happiness (...) through independent stimu-



lation of pleasure centers [...] and their attainment in personal life and actions?
”(Jonas, 1995, p. 53).

20. This problem can best be expressed in Luther's concept of *servo arbitrio*. For Luther, the freedom of the Christian is to freely surrender his agency so that it is God who decides his destiny. Thus, for Luther, the freedom of the Christian lies in returning to his agency, a servile agency to Christ (2006, pp. 155-170). The metaphysical question that arises here is: Can freedom deny itself? Can anyone freely choose to be a prisoner of something or someone? In our case: Can we freely choose to be prisoners of technology? If we can: Are we free by being prisoners? On the one hand, it seems so, since we freely choose it; on the other, no, because we are prisoners. Such being things: from technology can we deny our freedom?

Bibliography

AGUILAR, Floralba

- 2011 Reflexiones filosóficas sobre la tecnología y sus nuevos escenarios. *Sophia, Colección de Filosofía de la Educación*, (11), 123-174. doi: <https://doi.org/10.17163/soph.n11.2011.06>

AGUSTÍN

- 1958 De la doctrina cristiana. En *Obras completas de san Agustín* (tomo 15). Madrid: Biblioteca de Autores Cristianos.

ALONSO, Marcos

- 2018 La bio-ecología de Ortega y Gasset. *Pensamiento*, 75(283), 203-218. doi: <https://doi.org/10.14422/pen.v75.i283.y2019.010>

AQUINATIS, sanctus Tomæ

- 1951 *Summa theologiæ* (volumen 1). Madrid: Biblioteca de Autores Cristianos.

ARISTÓTELES

- 2014 Τὸν μετὰ τὰ φυσικά. En Autor, *Metafísica*. Madrid: Gredos.

AVICENA

- 1950 *Sobre metafísica*. Madrid: Revista de Occidente.
- 1980 *Liber de Philosophia Prima sive Scientia Divina* (volumen 1). Louvain: E. Peeters.

BAILEY, Doug *et al.*

- 2017 *Manifiesto transhumanista*. 4 de diciembre de 2017. Recuperado de <https://bit.ly/39rUsHr/>

BORGES, Jorge Luis

- 1974 *Obras completas*. Buenos Aires: Emecé.

BROWN, Francis, DRIVER, Simon & BRIGGS, Charles

- 1906 *Hebrew and English Lexicon of the Old Testament*. Oxford University Press. Recuperado de: <https://bit.ly/2F8cVuT/>

CHAKRAPARTY, Dipesh

- 2009 The Climate of History: Four Theses. *Critical Inquiry*, 35(2), 197-222. doi: <https://doi.org/10.1086/596640>

CONILL, Jesús

- 2012 La superación del naturalismo en Ortega y Gasset. *Isegoría*, 46, 167-192. doi: <https://doi.org/10.3989/isegoria.2012.046.07>





- FERRATER MORA, José
1975 *Diccionario de filosofía* (tomo II). Buenos Aires: Sudamericana.
- HEIDEGGER, Martin
1997 La pregunta por la técnica. En Autor, *Filosofía, ciencia y técnica* (pp. 111-148). Santiago de Chile: Universitaria.
2014 *Ser y tiempo*. Madrid: Trotta.
- HERNÁNDEZ, Juan Camilo
2018 Respuestas a las paradojas sobre la omnipotencia de Dios. *Pensamiento*, 75(283), 469-485. doi: <https://doi.org/10.14422/pen.v75.i283.y2019.026>
- HERNÁNDEZ, Juan Camilo & BARACALDO MÉNDEZ, Cristhian
2018 Antecedentes metafísicos del concepto *ser* de Sartre. *Universitas philosophica*, 35(71), 323-349. doi: <https://doi.org/10.11144/Javeriana.uph35-71.amss>
- HERNÁNDEZ, Juan Camilo & PÉREZ, Jhonatan
2018 Choque de paradigmas: análisis a las prohibiciones de Tamburini y Retz a diversas tesis modernas. *Cuadernos de Filosofía Latinoamericana*, 39(119), 47-76. doi: <https://doi.org/10.15332/25005375.5050>
- HERSKOVITS, Melville
2011 *El hombre y sus obras*. Santiago de Chile: FCE.
- SUTHERLAND, John
2009 The Ideas Interview Nick Bostrom. *The Guardian*, 9 de mayo. Recuperado de <https://bit.ly/2QAqqZG/>
- JONAS, Hans
1995 *El principio de responsabilidad: ensayo de una ética para la civilización tecnológica*. Barcelona: Herder.
- KANT, Immanuel
2011 *Crítica de la razón pura*. México DF: FCE.
- KÜNG, Hans
1999 *Una ética mundial para la economía y la política*. Madrid: Trotta.
- LEWIS, Charlton, SHORT, Charles & FREUND, Wilhelm
1956 *Latin Dictionary by Lewis & Short, Founded on Andrew's Edition of Freund's Latin Dictionary*. Oxford University Press. Recuperado de: <https://bit.ly/2MLPnA6/>
- MAQUIAVELO, Nicolás
1990 *El príncipe*. Montevideo: Nordan Comunidad.
- MARTÍN, Hugo
2011 Hablar de tecnología significa hablar del sujeto. *Sophia, Colección de Filosofía de la Educación*, (11), 11-30. doi: <https://doi.org/10.17163/soph.n11.2011.01>
- MERCHÁN, Xavier
2011 Ser, tecnología y educación. *Sophia, Colección de Filosofía de la Educación*, (11), 57-82. doi: <https://doi.org/10.17163/soph.n11.2011.03>
- MORIN, Edgar
2006 *El método 6: ética*. Madrid: Cátedra.
- NIETZSCHE, Friedrich
2006 *La voluntad de poder*. Madrid: EDAF.
- ORTEGA Y GASSET, José
1964 Meditación de la técnica. En Autor, *Obras completas* (tomo 5). Madrid: Revista de Occidente.

PIRO, Pietro

- 2013 Dos meditaciones sobre la técnica: “El hombre y la técnica” de Oswald Spengler y “Meditación de la técnica” de Ortega y Gasset. *Revista Laguna*, (32), 43-58. Recuperado de <https://bit.ly/39uQQ7I/>

POTTER, Van Rensselaer

- 1998 Bioética puente, bioética global y bioética profunda. En *Cuadernos del Programa Regional de Bioética* (volumen 7, pp. 20-35). Washington DC: OPS.

WEISSMAN, Alan

- 2007 *El mundo sin nosotros*. Buenos Aires: Debate.

Document receipt date: July 15, 2019

Document revision date: September 10, 2019

Document approval date: November 15, 2019

Document publication date: January 15, 2019



HOMO SLOTERDIJK: PHILOSOPHY OF TECHNOLOGY IN POSTMODERNITY

Homo Sloterdijk: filosofía de la tecnología en la Posmodernidad

LEOPOLDO EDGARDO TILLERÍA AQUEVEQUE*

Universidad Tecnológica de Chile INACAP, Temuco, Chile

leopoldo.tilleria@inacapmail.cl

Orcid Code: <https://orcid.org/0000-0001-5630-7552>

Abstract

The article tries to approach the non-systemic philosophy of the German thinker Peter Sloterdijk, the 'black beast' of current philosophy, from the idea of that his new Big Story (delivered fundamentally in this miscellany of philosophy of the history with philosophy of the technique that is Spheres) would constitute actually a kind of cocktail of different but cohabitants philosophies. This multiplicity of theories (spherical, immune, prosthetic, anthropotechnics, timotic) forms, in the facts, the same animal philosophy, which shows to Sloterdijk as one of the most influential representatives of the Nietzschean family. Together with this, the philosophy of Sloterdijk is presented itself as a new ontology (to say it well, as an ontogenesis of the inner space) whose essential component is the principle of information. However, it is necessary to understand his critique, rather than his post-liberal project, as a postmodern philosophy of the technique, whose key is the comprehension of the technology as destination inside the history of being. Finally, some ideas are decided a little more definitive in Sloterdijk: his political criticism as unmasking of the macrosphere of power (military, financial, journalistic, fiscal), his biotechnological offensive as a manifesto of a quinism historically rendered invisible by elite cynicism and, finally, that of the truth as an inessential concept to his psycho-political project.

Keywords

Sphere, philosophy, ontology, politics, technique, technology.

Suggested form of citing: Tillería, Leopoldo (2020). *Homo Sloterdijk: Philosophy of technology in Postmodernity. Sophia, colección de Filosofía de la Educación*, 28(1), pp. 67-90.

* Academic and researcher of the Technological University of Chile INACAP, social worker, journalist, master and PhD in Philosophy from the University of Chile. He is postdoctoral candidate in Philosophy of Technology at the Terra at Mundi Technological Institute in Mexico. Research lines: philosophy of technology, philosophy of religion, philosophy of art, aesthetics.

Resumen

El artículo intenta abordar la asistemática filosofía del pensador alemán Peter Sloterdijk, la 'bestia negra' de la filosofía actual, a partir de la idea de que su nuevo 'gran relato' (entregado fundamentalmente en esa mezcla de filosofía de la historia con filosofía de la técnica que es *Esferas*) constituiría en realidad una suerte de cóctel de distintas pero cohabitantes filosofías. Esta multiplicidad de teorías (esférica, inmunitaria, protésica, antropotécnica, tímótica) configura, en los hechos, una misma filosofía animal, que muestra a Sloterdijk como uno de los más influyentes representantes de la familia nietzscheana. A la par con esto, la filosofía de Sloterdijk se presenta como una nueva ontología (para decirlo bien, como una ontogénesis del espacio interior), cuyo componente esencial es el principio de información. Pero también cabe entender su crítica, mejor dicho, su proyecto postliberal, como una filosofía posmoderna de la técnica, cuya clave es la comprensión de la tecnología como destino dentro de la historia del ser. Sobre el final del artículo se decantan algunas ideas un poco más definitivas en Sloterdijk: su crítica política como desenmascaramiento de la macroesfera del poder (militar, financiero, periodístico, fiscal), su ofensiva biotecnológica como manifiesto de un quinismo históricamente invisibilizado por el cinismo de elite y, por último, la de la verdad como concepto inesencial a su proyecto psicopolítico.

Palabras claves

Esfera, filosofía, ontología, política, técnica, tecnología.

68



Introduction

Peter Sloterdijk has been declared persona non grata by the left-wing of the philosophical establishment and by much of the German intellectual elite. As Sordo and Guzmán (2013) affirm, he has transformed into a superstar of philosophy venturing into lands considered 'obscurantists' and flying a new non-unitary ontology that attacks with high firepower against Western metaphysical individualism. With the same enthusiasm, he directs his literary missiles both to entertainment fascism and to American politics.

As Duque (2002) observes, Sloterdijk faces Habermas's left, Apel, Tugendhat, which becomes obsolete in the face of technological, biotechnological and globalization progress. At the same time, he suggests a change of principles: parenting instead of education, biology instead of politics, race instead of class. In Sloterdijk everything is history: there is not a single man, nor a single humanism and there has not been nor will be a single way to face and understand the technique. This idea will be fundamental his its concept of anthropotechnics.

Margarita Martínez (2010) expresses this historicity very well:

Now, in the new interpretation of the post-Renaissance history offered by Sloterdijk, these three vexations raised by Freud obey the first primary vexation: vexation through machines or the idea of a system. For the Copernican turn, it implies that the earth is part of a system, subject of its rules, Darwinian vexation implies (with the antecedent of Vesa-

lian vexation) the dissection of the human body as a perfected machine from previous models (animals). Psychoanalytic vexation, meanwhile, implies the establishment of an uncontrolled system (even if one intervenes on it) of direct consequences on behavior. The irruption of the machine occurs exactly at the moment when new lands are discovered to conquer abroad and intimate domains to be investigated in the interior (p. 128).

Now, keeping in mind this understanding of the technique proposed by Sloterdijk, his thinking should really be understood as a postmodern formula in which different philosophies coexist in the same mediatic post-pessimism, so that his irreverent criticism (aesthetics, technological, financial, political, not to mention many other aspects of postmodern culture, especially European) responds precisely to that chameleonic quality that makes one wonder, more than ever, who Peter Sloterdijk really is.

We should start by placing Sloterdijk in the field of philosophy of technology, beyond the fact that his main detractors want to place him (assuming that this constitutes some type of discredit) in the field of literature. In this sense, and paraphrasing Floralba Aguilar (2011), his preferred task must then be “the apprehension of the being, and meaning of the technological phenomenon” (p. 134). Just what Sloterdijk goes for.

In the following pages, we will undertake the not easy task of chaining these philosophical perspectives in Sloterdijk, taking special care not to caricature his thoughts, no matter how much his prolific work has come to us apostilled in a gigantic kaleidoscope of ideas and counter-ideas. Probably the best way to understand Sloterdijk is to consider it a true oracle, only that this forecaster, who has become an expert in the historical analysis of the West, the only thing he seems to announce of the future is the crisis of coexistence within a society of pessimism. Moreover, the idea of the future tends to function as a kind of ‘anthropological obsession’, in the sense that for the Karlsruhe philosopher we live in a world that is increasingly futurized and that —and this is crucial— the deep meaning of what he calls ‘being in the world’ resides precisely in futurism.

Methodologically, the article is constructed from the approach of philosophical hermeneutics (focused preferentially and obligatorily on Sloterdijk’s theory of technology and partially on the existential ontology of Martin Heidegger) and the documentary analysis of authorized commentators on the developments of the German-Dutch philosopher. The notion of hermeneutics that is taken into consideration (especially since it is Sloterdijk’s philosophy the main object of study) is rather based on Gadamer’s critique (in Hermanus, 2013), for whom “art belongs to



the domain of knowledge and that it cannot be separated from practical activities such as decoration, technical and artisanal work, and the same perfection that technology points to” (p. 49).

This work is structured in five sections and one conclusion. In the first one, the concept of anthropotechnics is developed, a kind of anthropological thesis through which Sloterdijk defines man as a product of the technique. In the second, the idea of immune systems is approached, something similar to an adaptive shield of man in his future as a species. The third section deals with prosthetic techniques as the cynical nucleus of *Homo protheticus*, a sort of postmodern Prometheus. Next, the concept of *thymos* is analyzed, which in Peter Sloterdijk functions as a kind of heroic anger or ontological pride, something like the fundamental impulse that would allow the playful and ethical tendencies of *Homo technologicus* to be co-habitable. The last section, before the conclusion, discusses the neo-Nietzschean idea of genetic animality as a critique of Postmodernity.



Anthropotechnics

In *Spheres* (2006), his opus magnum, and as Sordo and Guzmán (2013) refer, Sloterdijk develops a complete *weltanschauung*, a kind of critique of the improvement of humanity, which attempts to synthesize a renewed Nietzschean animal philosophy with his own anticipations in mystical and magical traditions. According to Reyes (2019), Sloterdijk’s interpretation is “a strange medium hybrid between Heidegger and Nietzsche” (p. 218).

What happens is that Sloterdijk—in a strange mixture of cynicism and intellectualism—appears reversing a series of paradigms (the Heideggerian, for now) that, in turn, have consisted precisely in reversing, at the same time, other paradigms that had dragged Modernity moribundly (Cartesianism and Neoplatonism, to name just two). Without having to go much further, the concept of heroism itself, raised so messianically by the fascist tendencies of the left and right, is completely dismantled by Sloterdijk, to throw through his Frisian-Germanic jaws the only element that can somehow guarantee the survival of the ‘technological reason’: the sense of humor. Yes, as read.

From the point of view of ontological criticism, Heidegger’s being-in-the-world is replaced by Sloterdijk by being-in-spheres, right at the heart of his anthropotechnical theory, where the spheres would represent specific habitats, immunized, uncertain, fragile and, at the same time, therapeutic. Anthropotechnics means in Sloterdijk a system of being-in-

the-world training, just to survive in an environment not only hostile but also straight threatening (atmospheric terrorism). Hence, paranoia or schizophrenia are scenarios that can arrive at any time if the postmodern subject does not become ‘expert’ in the exercise of circumvention, irony, and acrobatics (therapeutic maneuvers par excellence). The spheres of Sloterdijk seem to be rather an armored cockpit that the individual must build and occupy to protect themselves from the dictatorship of the aristocracy ‘without virtue’, a dominant layer that, according to the philosopher, has been responsible for installing culture as a regulation.

In the words of Castro-Gómez (2012):

Without these artificial domes, without this technically produced “greenhouse”, without these immunological shells, men could never have become what they are. For Sloterdijk, being-in-the-world always means forming spheres, so that being-in-spheres constitutes the fundamental relationship for the human being (p. 66).

So what Sloterdijk understands by anthropotechnics (and this is extremely relevant from not only the philosophical point of view but above all anthropological) is nothing more than the true ‘nature’ of man, that is, the sociohistorical condition that defines and determines him. We reach a point in the philosophy of technology where the technique has succeeded in replacing nature as the essentiality of the species. Álvarez (2015) seems to think the same when he recognizes that in the anthropotechnics of Sloterdijk the ‘being’ is replaced by the movement of a historical dasein in the technical construction of its surroundings and of itself.

Such is the central idea of Sloterdijk’s theory: that anthropotechnics are a consequence of the theorem that considers the human being as a product, which can only be understood by understanding its relationship with the technique during the humanizing process. The idea of anthropotechnics, seen at the same time as ‘improvement of the world’ and ‘improvement of oneself’, does not mean anything else but to conceive man as essentially and originally technical, this technique understood as a certain degree of control over our own impulses. Sloterdijk himself specifies this idea in *Not Saved: Essays After Heidegger* (2001):

This term was recently misunderstood in a broad debate as a synonym for human biopolitics conceived in a centrally selfish and strategically planned manner and caused irritations that would be more typical of a religiously-motivated battle for man. But, in the context of the work developed here, the expression “anthropotechnics” responds to a clearly outlined theorem of historical anthropology: according to him, “man”

is basically a product, and can only be understood —within the limits of current knowledge— examining analytically its methods and relations of production (p. 100).

Thus, anthropotechnics are those immunological practices from which men from different cultures try to systematically protect themselves from the blows of fate and the risk of death. Hence, based on this technical essentiality of man, any possible prospect of technological optimization (including engineering and cloning, not to mention cryogenics) is finally inevitable. It is worth reading more closely to Sloterdijk (in *Der Tagesspiegel*, 2017) about this crucial idea of his anthropotechnics, that of considering —even biblically— man as the animal that lacks something:

There is some evidence that refers to the biblical account of the loss of paradise as the real beginning of the Western conversation about mankind. Certainly, it does not represent anthropology in the most specific sense of the word, but at the beginning, it emphasizes the fact that man is a being who had to survive an early change of place. Its position cannot be appreciated if the trauma of an original procession is not taken into account: a topological difference is printed on its psyche, that of paradise and not paradise, a difference that forms a scar more or less deep in the individual (p. 2).

What the idea of scar implies in Sloterdijk's analysis, or to put it another way, the figure of a 'fallen' subject in a 'technical' world that is not his, is precisely the point of difference that could be noticed regarding the Nietzschean superman. Indeed, if the cynical acrobatics of the *übermensch* was the response of the Zarathustra philosopher to the nihilism consecrated by Modernity (the work of Sloterdijk, *The thinker on stage: the materialism of Nietzsche*, 1986, is an obligatory reference of this story), in Sloterdijk the idea of 'eugenics' seems to occupy similar status as an operational and postideological principle, in a planetary scenario —paraphrasing Sloterdijk itself— where the only definitive thing seems to be the finitude of our energy reserves.

Summarizing: what appears on the surface of Sloterdijk's theory, as Consoli (2015) says, is a set of training techniques (anthropotechnics) that man applies to himself once anthropogenesis is completed as a form of production from the pre-human animal. However, the fundamental thing is happening in the current anthropotechnics, where a human being compulsively concentrated in himself (fitness, consumerism, technology of saying yes), forces more and more to the development of a 'private philosophy' in detriment of a 'public philosophy'. Consoli (2015) states: "The



intervention on oneself acquires more and more the form of augmenting, of physical, cognitive, prosthetic empowerment” (p. 139). It follows from this that prosthetics and biological techniques, as will be seen, represent the most efficient state of the new anthropotechnics in terms of the engineering of the operable man. Sloterdijk himself asserts (in Paredes, 2016): “Biotechnologies and nanotechnologies nurture, by their very nature, a refined and cooperative subject, and with tendencies to play with himself” (p. 154). In the words of Méndez (2013), the anthropotechnical dimension becomes a social history of the appeasement that demonstrates the way in which men are collected (in the sense of creating culture, but also of restraining themselves, of containing themselves) to correspond to the whole.

There seems to be no doubt that in the confines of this anthropotechnical phylogeny there would be, in a phase of definitive transmutation, the passage of the human being to become the technological being, lineage on which everything could potentially be expected.



Immune systems

Paradoxically, and as Martínez (2010) puts it, given that ‘helpless humanism’ is the paradigm that has conveyed the traditional and bidirectional states of language and writing (typical of the European logo-phono-centrism widely treated by Derrida), “Sloterdijk’s final diagnosis is that, currently, you have to become a technologist in order to be a humanist” (p. 7).

But it is not about any humanism (or at least not one of the many that the boutique of philosophy offers, especially during the first half of the twentieth century). The humanism referred to by the German philosopher is technical humanism, in which precisely the technique provides man with a collection of immune systems that allow him to integrate himself, in an equipped manner, to his environment. In other words, a set of therapeutic and physical and spiritual shielding techniques of an adaptive nature with respect to nature from which the human species has not been separately born. Then, anthropotechnics (that is, the idea that explains this ‘new’ nature of man) can be seen as a general asceticism based on a biosophical interpretation of man, from which the immune systems, if it can be said so, refer to a virtual policy of acclimatization.

Consoli notes that (2015):

The ascetic practice —understood in the Foucaultian sense of “a personal exercise on oneself, through which man tries to elaborate, transform

and acquire a certain way of being”—represents not only the form of *epeleia heautou* (the “care of the self”), but also—less obvious—of the other forms of subjectivation, being forms of repercussion on oneself through undeclared exercises, “hidden training habits” (p. 136 ss.).

This psychodynamic training, this ‘self-care’ or asceticism that Consoli refers to, must be understood—if the thread of Sloterdijk’s discourse is followed with attention—as a technique of producing an artificial environment suitable to ensure the development of the individual-species, considering as operational principle (it could even be said, properly eugenic) all those transformations that the subject must make about himself and his own products. That is, it is the idea of an immune system as a sphere of protection but at the same time as systems of adaptation and artificial survival.

Reiterating the argument, immune systems of this type act virtually as second nature in man, something similar to an adaptive cortex that human beings have been changing through various training mechanisms during all these centuries (the *homo faber* and the *homo religiosus* are typical cases in the history of this trained man). It cannot be clearer in the words of Bordeleau (2009): “It is an enlightened position [that of Sloterdijk], which tries to combat the mass mediatic stench on its own ground with the help of a critical air theory that assumes the task of air-freshening public space” (p. 6). To put it another way: a theory of immune systems that propels the development of psychic-symbolic spaces (biopolitical, ethopoietic, domestic) in the Pharisaic scenario of the political philosophies of cynical power (Postmodernity).

The obvious thing is that Sloterdijk aspires to design a global immune system (a co-immunity or co-immunism) where not only all men but the entire ecosystem (to be exact, the atmosphere) are included. Indeed, for Consoli (2015): “The project of a global immune design should become planetary, where the globe, surrounded by networks and foams, is considered as its own, and the excess of dominatory exploitation as an alien” (p. 141). It is these immune systems—if Sloterdijk is well understood—that will allow *Homo immunologicus* to survive and develop the last anthropotechnology, completing—a half artistically, half technologically—the unfinished exercise of the Nietzschean *übermensch*.

However, there is an explicit accent of Sloterdijk (probably his most aggressive idea regarding the impact of his spherical theory on the contemporary state) on the issue of extended motherhood as a phenomenon of Modernity. The image that best represents this concern is precisely that of the extension of the maternal sphere (protection, pampe-



ring, care) towards a new limit: the formation of a new immunological layer, this time of State responsibility. What there is, in short, is the figure of allomaternal benefits, that is, a virtual incubator of zoopolitical protection at the hands of the very State.

Sloterdijk explains (2006b):

The sociotechnical nucleus of Modernity consists of the explicit protection of maternal benefits. The “conception, which marks the time, of an artificial mother” is not only a whim of alternative medicine, which a pre-suicidal Swiss writer mocks; It is the hidden, but easily recognizable, business principle for a biased look of the welfare society. The State —now obliged to “bureaugamy” or to the politics of pampering—, since its reform as a welfare and assistance agency, functions as a meta-prosthesis, which it puts into the hands of concrete maternal-prosthetic constructs, of social assistance services, of the pedagogues, of the therapists and their innumerable organizations, the means for the fulfillment of their tasks (p. 605).

75



This condition of neo-immunization with respect to an individual-beneficiary, who seeks the same maternal pampering now in the domain of the society of opulence, has enabled, in Sloterdijk's opinion, the great paradox of the postmodern state: to imply this logic of justice in the access to pampering and welfare systems (in fact, to the dynamics of consumption) in the political idea of access to human rights. Sloterdijk (2006b) says: “From the turn to the welfare of the ‘masses’ inside the great greenhouse, equality between human rights and comfort rights was enforced” (p. 606). In fact, it is quite paradoxical to try to include the Other in need (emotionally, financially, politically) in the subject's own sphere of protection, that is, to give him guarantees of access to the advantages of the welfare system (as Sloterdijk says, also to open the access to the world of abundance), and at the same time consider him a direct rival in the field of consumption. In any case, it is not surprising for Sloterdijk this asymmetric configuration of the macrosphere; In fact, it is its foundation. When he calls this State of comfort ‘socio-thematic tension construction’, what the philosopher is doing is just revealing the essence of this greenhouse: the continuous thematization of irritation and discontent regarding urgent claims that are never satisfied. This is, with all precision, the genesis of the only discourses that remain available as discourses of dystopia (where curiously the stress of war would be, in this case, an exceptional synchronization).

It is convenient to consider the idea of a sphere system as a work of art (so to speak, in the aesthetics of Sloterdijk's artificiality). Indeed, the

individuals who participate in this macrosphere, as a large greenhouse, develop endless discursive strategies in pursuit of care, lightening, consumption and even luxury (everything that comes to be the theory of comfort), exposing, more or less, their lack of drive. However, the scenario available for these unloading operations is the most artificial of all: all circumstances can no longer be designated with the concept of natural. This hypertificiality forces us to resort to aesthetics as a conceptual milestone when it comes to a better definition of the movements of this great museum. The meaning is broken, says Sloterdijk (2006b), of the opposition between art and non-art:

While the life forms of affluent society embody the artificiality prototype, it is not plausible to pay more attention to individual objects, such as works of art, than to any non-prominent objects. No individual object can be more worthy of consideration than the entire installation; consequently, the exhibition of works of art gets competition by the exhibition of devices that, until now, were outside the concept of art and, even, in short, the exhibition of the place of the exhibitions (p. 612).

This reference is transcendental from the theoretical point of view of Sloterdijk's philosophy, since it truly marks in the final stage of his meditation (if it were really possible to talk about it) a more or less determined inclination, although no less problematic, towards a surprising philosophy of art.

The premise is as follows: the system is so important from the point of view of the reconstruction and air freshening of human relations, that in the end, it ends up being as or more decisive than its own clientelist and social-bureaucratic dynamics. Individual object and complete installation (that is, human being and global sphere that contains it) are worthy of the same ontological-aesthetic consideration from the moment they both embody the same artificiality prototype: enveloping, comfortable, self-referential and extraordinarily mimetic. Such a statement makes possible even the obvious similarity between the concepts of art presented by Luhmann (particularly in his work *The Art of Society* from 2005) and Sloterdijk himself, especially if one thinks about the identification between the ideas of 'society system' and 'art system'. As Valenzuela (2014) refers, for Luhmann (without entering an iota in his sociological theory) art will take the form of intertextual networks of works that limit the scope of possibilities and the sense of future works that become the same networks, evaluated and reevaluated according to criteria that would activate an extensive binary code. In other words, art



considered a functional system of modern society in which the role of the work has been transferred as art applied to the concept of communication (quite far from the institutionalized systems of classical, ornamental, popular or even contemporary art).

On the same topic, the reflection of Sloterdijk (2006b) on the role of the hermeneutic way of philosophy in this phase of the total installation, is very compelling:

The museum of the present, philosophically curated, has the strange ability to show the permanent end of art by its decline in the artifice of superinstallation. It is the only place in the system where its primary quality can be observed as such: to be the installation of the enveloping or the totally artificial situation (p. 613).

Then: it is the philosophy of the sphere as the philosophy of art (as exhaustion of philosophy, paraphrasing Sloterdijk) that allows our author to operate a certain transmutation of artistic values (at least of the work, not to mention the editorial value of the critic) in what he calls “stock market system of art”. Sloterdijk says, *Art retracts on itself: presentation of a unique exhibition* (2007):

The expansion of the concept of art is a mirror image of the expansion of the subjectivity of the value-creating artist. Finally, everything that touches the artist’s life has to be transformed into art. King Midas is everywhere. If it had been legally possible, Andy Warhol would have sold entire streets of New York buildings to collectors with solid finances that he had transformed into works of art as he strolled through them (p. 104).

So this frothy vision of Sloterdijk what it does is to decentralize the artistic power of art, to configure the latter in a state of restitution of action. This question of art and of action, if the dialogue (sometimes more intense than it would be supposed) between Sloterdijk and Heidegger, looks precisely at the essential difference between both German philosophers, or to put it with a greater degree of historical drama, the fundamental leap from Heideggerian ontology to sloterdijkian anthropotechnics: is the matter of space. “In *Being and Time*, space is simply themed as a world, but it does not deepen on what that space consists of, or how we inhabit it (or we must inhabit)” (p. 225). In this regard, Rincón (2014) lucidly noticed the reverberation of Eastern philosophies that allowed Sloterdijk to reinterpret the relationship between philosophy and art, a path that in the intersection with Nietzsche’s meditation could only come from the flowering of a corporal philosophy:

[Sloterdijk] absorbs elements of Eastern philosophies, marked by two fundamental characteristics: first, the conception that thought requires a body in optimal conditions for the exercise of the contemplation of the cosmos and, second, language is always insufficient to represent the cosmos in its entirety (p. 316).

In short, the idea of language, or of discourse, as a psychopolitical form par excellence of art. It is not surprising, therefore, that art and immunization appear in Sloterdijk's theory as part, so to speak, of the same notion of sphere. The entire philosophical journey that Sloterdijk has borne, mounting and dismantling, again and again, the technical implications that he notes in the civilization of man (that is, and only to choose an essential dimension to his project, in the political sphere), acquires consistency if it is accepted, even reluctantly, that its purpose is still messianic: to provide the individual with a general immunology against the inevitable collapse of the current state of affairs.

This would explain, in a way and resorting to a well-known wink, Sloterdijk's 'turn' from an aggressive nietzscheanism to cynicism close to that of the Diogenes (the dog), demonstrated above all in a more cheerful and absurd philosophy, and, therefore, with a more affirmative sense of civilization.

Prosthesis

Now, in this strange philosophy of technology that Sloterdijk proposes, artificiality, as it was said, happens to play the role of a second or, so to speak, of the 'true' nature of man. Hence, all those movements aimed at strengthening, adapting or optimizing said artificiality constitute fundamental adaptive maneuvers of human evolution. It is precisely the case of the prosthesis. In *Critique of Cynical Reason* (2003), Sloterdijk will do just a sort of unmasking of the Nazi ideology, which he sees hidden in a delirious spirit of technique expressed in the image of mutilated German soldiers returning from the 'great war'. There, prosthetic techniques are analyzed as the core of a medical, military and ideological cynicism, which strategically manages to impose the will of what the philosopher calls *Homo protheticus*. For Sloterdijk, Third Reich's cynicism manipulated not only the use but, in particular, the sense of a technique transformed into 'organic', which ranged from the prosthesis as restoration of the residual stump to the organization of the military community. It reads in this work:



The optimism with which the instructors of the invalids, of that time, infused their protected positive feelings and joy of living and urged them to continue working seems paradoxical to us today. With extreme seriousness, patriotic doctors, ragingly jovial, addressed the crippled: “Also in the future, the country will need your services, even the crippled, the lame or those who wear prostheses can continue fighting in front of production.” The great machinery does not wonder if they were activated by “individuals” or human-prosthetic units. A man is a man. In the manuals for invalids and in the writings of medical technique, a human figure of enormous contemporaneity is constituted: *Homo protheticus*, who must say a fierce “yes” to everything that says “no” to the “individuality” of the “individuals” (2003, p. 632).

If the underlying idea about the status of the prosthesis is well understood, it is realized that what is relevant to the immune processes is not related to quality or complexity, not least to the usability of the prosthesis, but in reality, with the social structure that this technique requires and determines. In other words, with the very exercise that the prosthesis demands as a “natural” additive to the body. Seen in this way, Sloterdijk’s prosthesis represents the probability of connecting body-artifice in the same ontogenetic unit, possibly in the most successful combination that nature can provide for any living system. The distinction of Martínez (2010) is, therefore, very clarifying, when he indicates that “Sloterdijk defines the immunological success of an individual as the development of a powerful narcissism that is a sign of integration of that individual in his moral collective” (p. 3). So, the prosthesis described by Sloterdijk goes on to fulfill an optimizing (therapeutic) function of the biopolitical viability of man, especially in a society where biotechnologies have come to configure, one could say, the ‘new anatomy’ of Postmodernity. In this sense, the conceptual leap that Sloterdijk provokes from the idea of prostheses is fully introduced in his ontological proposal of asceticism of Postmodernity. Indeed, this kind of additional instrumentation that involves the prosthetic, however, should not play any role in a heroic sense, nor in a pitiful consideration, let alone in an epic extolling of the Nietzschean court. On the contrary, the prosthesis should only guarantee a genuinely civilized becoming precisely because with Sloterdijk it is a ‘post-Miserabilistic’ metaphysics, which thinks the subject in reality as the subject of impossibility (precisely foreshadowed in the prosthesis thesis as ‘nature’).

In this way, the prosthesis, far from appearing as a prototype of denaturation or artificiality, imposes itself as a kind of technical-natural contraption closer to stoicism than to the political, technocratic or reli-



gious fundamentalisms of the last hundred years. The best trick of the postmodern tightrope walker. Sloterdijk argues as a guide to the idea of 'absolute imperative' (in Ríos, 2013):

Every individual will have to admit, if seriously analyzed, that he has done of himself less than he should have done according to his capacity, except for the few moments in which he could say that he has performed the duty of being a good animal. Like a mediocre animal, spurred by ambitions, infested with excessive symbols, man lags far behind of what is asked of him, even when he wraps himself in the victor's jersey or the cardinal's (p. 13).

Paradoxically, this prosthetic philosophy has a peculiar similarity to Lewis Mumford's machine theory, for whom the machine is a projection of human organs and the goal of technology is to satisfy man's superorganic aspirations. The fascist prosthesis seems, then, to be equivalent to the Mumford mega-machine, a complex, ductile, transformable and multifunctional machinery. Now, the philosophical background of the prosthesis program seems to be found by Sloterdijk in Friedrich Dessauer's ideas. For Sloterdijk (2003), Dessauer represents the engineering affirmation of the technique, a statement that the Reich quickly transformed into a will to dominate:

In this double affirmation, the steel subject of the future moves. This is inseparable from this subject's high mastery over himself: that is why the dominant theory of that time speaks incessantly of the heroic. This does not mean anything other than intense autosuggestion: the rhetoric of courage means, in this case, to dare to a higher degree of self-deformation (p. 643).

Whatever the case, Sloterdijk will see in Dessauer's program hardly anything more than a philosophy of technique as an imitation of an unfinished Kantian philosophy of science. Far from conceiving, in Dessauer's way, the operation of technique as an extension of the Creator's work, Sloterdijk will delineate an approach, if it can be said so, markedly ultra-liberal about its possibilities.

In summary, for Sloterdijk the machine will not be more machine (or at least not purely machine) if viewed from a new ontology; if it were, it would be to return to the univalent and worn out ontology of the soul versus thing. According to the philosopher, the machines are by nature prostheses and as such, they are made to complete and replace the first machine construction (the one that delivers nature) with a second, arising from the spirit of the technique. Care must be taken, therefore,



not to understand by ‘prostheses’ only the primitive substitutes of the organs that have already been finished. On the contrary, the nature of the prosthetic involves replacing more imperfect organs with more efficient machines. Thus, for Sloterdijk (2000) the offensive quality of these replacements appears just at the moment when the restorative prostheses are abstracted and considered, from a genealogy of the technique, the expansive prostheses as the determining prostheses.

Thymos

Well then, for Sloterdijk, Modernity is —as it has not gotten tired of repeating it— pure anthropological stagnation, a pathological state that for which he blames a diverse number of factors: the legacy of the Enlightenment, the Frankfurt School, psychoanalysis, Heidegger, Sartre, the authoritarian-absolutist tradition of the monarchical impositions of premodern states, the welfare state, and a long etcetera. In any case, what matters here is that, as an aesthetic thinker, Sloterdijk believes he sees in the thymos-Eros couple the update of the Nietzschean vital impulses: Dionysus and Apollo. It says more or less this: that man has by nature a set of vital impulses aimed at self-affirmation, that is, internal forces charged with privileging the feeling of pride as part of a general immune system (through indignation, revenge, guts, the demand for justice, pride). This theme, as Reyes suggests (2019), “opens up paths for men so that they are able to affirm what they have, can, are and want to be” (p. 213).

Quite nietzscheanly Sloterdijk affirms that (in Reyes, 2019):

The Greeks thought that seeing was the most important fact. He who sees is rich, this was an Aristotelian conviction. The word “cosmetic” is related to the cosmos, the one who sees the cosmos is, therefore, in front of the treasure chest of being as such and is per se holder of it. So at the same time you can rejoice and be proud to exist. This implies that we should not want those qualities but see them as something that is at our side (p. 214).

Said in plain English: Modernity has meant that in the history of being, war gives ground to *Eros*. It is the same as saying that in the current phase of history, the erotic impulses (which until now had been confronted with an abundant literature focused on *logos* when not on *ethos*) have left man in a state of complete ontological indigence, especially considering the platonic idea that eroticism is essentially the desire for what we don’t have. But it is, according to Sloterdijk, quite the opposite: not to



look at what is needed (much less get to suffer it), but to consider what is and what can be from a point of view of a irreducible ontological pride, that is, under the premise that, as Reyes (2019) points out, “existing does not imply any lack, but, on the contrary, the satisfaction of belonging to the cosmos” (p. 214).

Actually, it's about rage. Then, it should not be surprising that the text where Sloterdijk pours his idea about the timotic impulses is precisely *Rage and Time* (2010), a title that by itself speaks of his attempt to sweep with the Heideggerian *dasein*. However, it should be clarified that what the Karlsruhe philosopher postulates, even though sometimes a little contradictory, is the restoration of the ancient rage of the Greeks (embodied, as he emphasizes, on the first page of Iliad: “Sing, oh goddess, the rage of Achilles form Peleus”). This Hellenic rage has nothing to do with the anger systematized by Christianity in its veteran or neo-testamentary versions. Much less with the anger most recently administered by communism or nationalist fascism. Not to mention the cinematic sadism posted on the Internet by the Islamic State.

The rage of the timotic impulse that the German-Dutch philosopher sees is rage in the heroic sense, that which exalts the existence as a prior right to any other psychopolitical or anthropological consideration, and which in no case has to do with the anger of resentment or with that of cowardly revenge. The latter is defined by Sloterdijk as a ‘reactive feeling’ towards ‘hurt pride’, a sort of accumulated resentment that continues to sharpen our current pathology of being. It happens that Sloterdijk makes a revaluation of this idea of Hellenic belligerence and exports it to the postmodern situation, not placing it in the pure revenge of the Hoplite warrior, but in the manner in which we react when our comfort zone is threatened inside the uterotope (as a space of protection or topological reality in which we act outside the mother's womb).

Sloterdijk says in *Rage and Time* (2010):

Is not “world” the word for a place where men inevitably accumulate memories of wounds, insults, humiliations and all possible episodes against which they subsequently wanted to clench their fists in anger? And all cultures are not always, in an open or hidden way, traumatic collective archives? From reflections such as this, it can be deduced that the rules of cunning of all civilization belong the measures to erase or contain the inflamed memories of afflictions (p. 62).

Now, when this anger fails to express itself therapeutically, that is, restoring or healing these collective, moral or psychic wounds (for



example, in the feats of victories and defeats typical of a history of war), something similar to a castrated, cancerous, political anger is produced. Sloterdijk completes the argument, suggests Huerta (2016), indicating that anger begins to disappear from charisms when heroic-warrior virtues become citizen-bourgeois qualities, which would only be manifested in ‘ghostly enthusiasms’ until finally being excluded from culture.

In the same way, as Nietzsche did through his transmutation of values, Sloterdijk undertakes through his timotic philosophy a complex exercise of transvaluation that basically involves facing two enemies: on the one hand, the doctrinal religions of humility (the Christocentric of preference), and on the other, the psychoanalytic and erotic theories that have replaced the warrior and vengeful impulses with the neurotic (*Tanatos*) and libidinous (*Eros*) complexes. This valuatory hostility would justify in Sloterdijk his description of Modernity as a broad antigenealogical experiment. Sloterdijk is revealed in his theory of thymos as the kaleidoscope of philosophies that he is: thymic and biopolitical impulse, merge into the fundamental concept of an ‘antigravity’ trend. What this tendency does, to some extent, is to connect the ethical, biophysical and economic spheres in the metadiscourse of a general immunology, in the simultaneous design of individual movements and fiscal and business determinations with a view to what has been called ‘civilizational altruism’, behind which Sloterdijk places the principle of private property as a kind of *sanctasanctorum*. The thesis is quite simple: private property will guarantee the individual the affirmation of himself, simply because ‘he who has, gives, and only he who gives affirms himself’.

Somehow, Sloterdijk strips a new dialectic (one might even say, a new historical materialism) just as the engine of his psychodynamic theory: the timotic and erotic forces are still indispensable in the strategy of self-affirmation. In this sense, the Sloterdijk dialectic seems to be closer to the Georges Gurvitch dialectic (in Ogaz, 2012), for whom “dialectics is only applicable to society and to history and partially to nature” (p. 90). Sloterdijk seems to flirt with Jaspers’s idea of one-self, although he never recognizes it. However, it is clear what his formula is: the erotic impulses (individual, greedy and appropriating) must be replaced by the thymic energies (generous, prestigious and donor), if our horizon truly is a more ‘materially’ democratic society.

Said allegorically, the timotic impulse seems to be the one that changes in the game board (for system efficiency) the card of indignation for that of generosity.



Animality

The thesis of this article suggests the existence of several cohabiting philosophies in Sloterdijkian meditation. It is necessary to retain this, as it is the only way to be able to understand, at least with a minimum degree of certainty, the apparently arbitrary transit from an animal philosophy to another based on the idea of sphere, or a technique-centered one (or as it has been called here, from the prosthesis) to another constituted by immune systems, or even one based on thymic impulses.

Sloterdijk, in *The operable man: notes on the ethical state of gene technology* (2006a), describes a new form of culture, founded on the role of micro-networks of information as tensors of biotechnical acclimation from preferably domestic spaces. This means that the key to the anthropotechnical connection systems is the principle of information: “In the phrase ‘there is information’ there are other phrases involved: there are systems, there are memories, there are cultures, there is artificial intelligence” (p. 8). And the Germanic thinker adds, in which could be said is his main ontological idea: “Even the sentence ‘there are genes’ can only be understood as the product of a new situation: it shows the successful transfer of the principle of information to the sphere of nature” (P. 8). It should be emphasized that the fundamental thing of these observations is that they represent a new subjectivity (which adds elements of the natural environment) and, at the same time, new objectivity (constituted essentially as ‘informed matter’). Such performances, says Sloterdijk, may include the emergence of planning intelligence, dialogic ability, spontaneity, and freedom.

Thus, the information co-produced homeotechnologically will determine this new human-machine relationship through interaction with complex texts and hyper-complex contexts. According to this new information ontology (specified in the concept genome as data available for the whole species and not only for the cynical biotechnology entrepreneur), the data is no longer seen as a strategic trophy, to move into context of productive intelligence as technological ‘self-operation’.

It is clear that Sloterdijk’s criticism places technology at the center of culture, as a kind of hyperconnector of multiple intelligences, without margins for domination, enslavement or concealment of information and knowledge. Thought this way, the contest develops in these same moments. On the one hand, alotechnology, as advanced technology, in its strategic and dominant use as a ratification of the Pascalian affirmation that man ascends endlessly beyond man; on the other, homeotechnology, founded on multi-purpose information media and an ecology of intelli-



gence. Sloterdijk provides the verdict (2006a): “Developing technologies will mean in the future: reading the scores of embodied intelligences, and contributing to subsequent interpretations of their own works” (p. 17).

Such engineering, whether one likes it or not, is a theory of machines, which puts the technical object within the idea of human nature and not outside or against man, as humanism had pontificated. This explains why Sloterdijk, continuing Nietzsche’s critique of Modernity, reveals in his *Rules for the Human Park* (2000) a human genetic animal, which, domesticated by culture and training, would not have yet been able to develop, showing thus our failure as a species.

On this, the analysis of Martorell (2013) is still suggestive. For him, what Sloterdijk does plainly is to decree that “biotechnology must replace the pericyclic humanism” (p. 174) or in his happy literary analogy, that “only genetic engineering can train, perhaps annihilate, Mr. Hyde in the coming stages” (p. 174). By the way, Martorell’s critique of Sloterdijk’s technological determinism is very acceptable, which presupposes that “given non-totalitarian techniques, we will automatically have democratic relations” (p. 177). Now, it is not that technological development cannot occur in terms that Sloterdijk observes. On the contrary, the current technological drift gives man possibilities of intervention in gene, medical, economic and military processes that, like never before, can dramatically alter the meaning and configuration of the concept of species. Only that it is hard to think (if we blindly follow Sloterdijk) in a group of men of science who agree on bona fide a responsible, collaborative, symmetrical and controlled bioethical management status of their technological practices.

Granting the possibility of the Mr. Hyde hypothesis as essential to human nature (the innatist thesis of violence), there is no evidence of how sensibly it can work, following Martorell’s (2013) argument, “the suggestion, openly neo-eugenic, to pacify man through genetic engineering” (p. 171). The main question of Sloterdijk, following Martorell himself, seems to fall into an idyllic vision of technology: “While in anthropology he is pessimistic in the sense that I have been describing, regarding the recent developments in technology, his optimism brushes on credulity” (p. 177).

However, this criticism does not destroy the central argument of the ontological project of Sloterdijk, which understands technology as a destination within the history of being. As much we don’t share his questioning about whether the human race will undergo a transformation from the fatality of birth to an optional birth and prenatal selection, nothing authorizes us to discard or minimized it just because it is not to the taste of some. In fact, it will not be in the field of ontology, but in the field of bioethics



(that is, very ‘anti-sloterdijkally’), where the detractors of the Teutonic philosopher will draw their best harquebuses to try to bring down the *bête noire* of current philosophy and bury all vestiges of Mr. Hyde.

Conclusion

So far it has been possible to incubate what research has determined as the key pieces of Peter Sloterdijk’s philosophy. Thus, the notions of anthropotechnics, immunization, prosthetics, thymotics and animality, far from being conceptual collections for a kind of translation of the ‘Sloterdijk’ code, have turned out to be (very much in Luhmann’s line) systems of distinction with respect to psychodynamic functions of the individual. Both the idea of an essentially technical man (and thus transformed into *Homo immunologicus*) and that of a new dialectic of self-affirmation (which replaces erotic selfishness with timotic generosity, facing a more civil-centered democracy that in the verticality of the institutions), they put into play the figure of a new animal that, it could be said, ‘improves’ the debatable ontology of the *übermensch* of Nietzsche. From a cynicism, in any case, closer to that of Diogenes of Synope, Sloterdijk reworked the idea of the Nietzschean *übermensch* and transmuted it into an acrobat of creativity and overcoming, bearer of the new fire of the gods: the ethical-aesthetic imperative of the Postmodernity.

The project of future philosophy of Sloterdijk can be seen as the continuity of a line that was born with the philosophy of art of Nietzsche, continues with the philosophy of the technique of the second Heidegger and connects later with the doctrine of the multiplicities of Deleuze. However, its radicality and novelty consist of erasing this metaphysics and social theory of the totality at a stroke to give significance to the ontological cutting of the foam as a true possibility of immanence of the real. Indeed, foams are biogenetic processes in whose chaotic interior there are constantly jumps, transformations and changes in format. Predictably, says Acevedo (2013), with the image of the Sloterdijk foam, he immerses himself in the proposal of a new philosophy, knowledge theory, ontology, linguistic theory and form of appropriation of the world. In any case, the amount of questions that remain is overwhelming. At least two will be indicated.

First, who will define (in a world where nature and culture practically become indiscernible) the ontological limits and implications of the species (androids, ginoids, cyborgs, men-protheses, transhumans,

replicants) that pretend to live ‘dialogic’ and ‘no-Dominantly’ with the human being? How and with what arguments will the protocols, rules or deontologies be decided in a ‘biotechnological century’ formed as ‘inter-intelligently condensed world-network’? And that, without considering the discussion about some positions that are based on the thesis of genetic improvement (or even the idea of immortality) and that seem to have been certified by post-liberal projects such as Sloterdijk (is enough to mention his defense of transhumanism and cryopreservation). Bonet (1999) synthesizes it clearly: “Sloterdijk relies on Plato to defend a society in which philosophy is discipline, which dictates to the experts in genetic technology the ethical rules for using their science” (p. 3).

Second, the question of truth. The problem could be translated into the fact that there is not a single and definitive truth, and there is not simply because the truth is inessential to Sloterdijk’s psycho-political project. His theory of reality based on a model of foams, according to Goycolea (2017), does not need permanent or non-contradictory categories of thought, so that what exists is a new epistemology, which sees in humanism an epistemological expansion of The Roman *humanitas*. What interests the Sloterdijk project is not the statute of the true statements, but simply the materialization of the self-affirmation of the individual, in an absolutely rectilinear edge with respect to the best survival policies. In any case, the enunciative question of reality (within the framework of a global ethic) is protected by Sloterdijk’s own immune systems: the biological, that of social practices and that of symbolic or psychoimmunological practices.

In this regard, the superb analysis that Professor Cordua (2008) makes of the concept of truth in Sloterdijk makes clear this veritative scope. There will be truths from both laity and experts: “There have never been a people that does not at least rudimentary develop a ‘bicameral system’ of access to the truth” (pp. 181 ss.). Thus, it is expected that a reality that works and is explained under the spherical mode, shows multiple forms of truth at each point of contact and disappearance of their joints and edges, precisely a fragile discourse that is at the antipodes of the programs of the right and left fascisms. In a second idea from Cordua (2008): “Instead of linking the historicity of truth to the problematic set of human knowledge, Sloterdijk prefers to see it associated with decisive events that inaugurate times of the historical process, equally affecting man and his world” (p. 187). In other words, the truth of Sloterdijk is not an enunciative or declarative matter, but rather of a psychodynamic nature: typical of the cultural habitat of a given space. Hence, what really



matters to Sloterdijk is not exactly what the truth is, but in reality, how it is that the truth happens and is related to those who experience it.

That said, we can only ask: having so many possible and natural truths, thought of a new phenomenology of the marginal and the domestic, and turned technology into an essential coevolutionary element of the human being, was it not just to expect the next step to be in the direction of eugenic truth as normal? Not only has Sloterdijk not betrayed his way of interpreting the world, but he has been very careful to unlock the anthropotechnical problem of Postmodernism without resorting to the resources of metaphysics (being, consciousness, cosmos, etc.). However, what is still at stake is the cynical condition of man. So much so that the political criticism of Sloterdijk seems to show itself as the unmasking of a macrosphere of power (military, economic, journalistic, fiscal) that seeks to eternalize in a system without tensions or contradictions.

Seen in this way, the biotechnological offensive presented in the *Rules for the Human Park* must be understood as a sort of manifesto of a cynicism that has historically been made invisible and unfeasible by elite cynicism, whose camera aid has shamelessly almost always been the yellow press. For this reason, it will be necessary to recognize in this chemical disinhibition put into play by the biotechnological displacement of Sloterdijk, the merit of trying to return to the simplicity of the original cynicism. According to Bordeleau (2009): “his desire to develop a philosophy called ‘integral’ and anti-schizoid by him (p. 4), an issue that, as noted by Bordeleau himself, has consistently earned Sloterdijk the criticism of reducing the political to the domestic sphere. The physiognomy of a philosophy of difference seems in Sloterdijk, then, evident. Consistently, the philosopher of Baden-Württemberg has cut the Gordian knot of onto-technology with the weapons he has preferred: an undercover cynicism in the media figure of the ‘double agent’, paraped in as many philosophies as possible, an unequivocal sign of his postmodernity.

Bibliography

ACEVEDO, Mirsa

2013 *Sloterdijk: Teoría general de la espuma en Esferas III*. Instituto de Estética PUC. Recuperado de <https://tinyurl.com/y7updfqd/>

AGUILAR, Floralba

2011 Reflexiones filosóficas sobre la tecnología y sus nuevos escenarios. *Sophia, Colección de Filosofía de la Educación*, (11), 123-172. Recuperado de <https://tinyurl.com/sfdknor/>



ÁLVAREZ, Carlos

- 2015 Aportes de la filosofía de Peter Sloterdijk, para la fundamentación de la bioética latinoamericana. *Revista Colombiana de Bioética*, 10(1), 24-37. Recuperado de <https://tinyurl.com/vnnxlum/>

BONET, Pilar

- 1999 Un filósofo alemán remueve fantasmas. *El País*. Recuperado de <https://tinyurl.com/y7c4azsz/>

BORDELEAU, Erik

- 2009 La terapia cósmico-imperial de Peter Sloterdijk. *Espai en Blanc*, 1-9. Recuperado de <https://tinyurl.com/yaus664d/>

CASTRO-GÓMEZ, Santiago

- 2012 Sobre el concepto de antropotécnica en Peter Sloterdijk. *Revista de Estudios Sociales*, (43), 63-73. doi: 10.7440/res43.2012.06

CONSOLI, Darío

- 2015 Antropotécnicas del ejercicio y análisis de la subjetividad contemporánea en Peter Sloterdijk. *Soft Power*, 2(1), 135-142. Recuperado de <https://tinyurl.com/y2yjk2zr/>

CORDUA, Carla

- 2008 Sloterdijk sobre la verdad. *Estudios Públicos*, (111), 173-188. Recuperado de <https://tinyurl.com/y7vmmre6/>

DER TAGESSPIEGEL

- 2017 *Das Tier, dem etwas fehlt*. Recuperado de <https://tinyurl.com/y6yu4l8j/>

DUQUE, Félix

- 2002 *En torno al humanismo: Heidegger, Gadamer, Sloterdijk*. Madrid: Tecnos.

GIMENO, Xavier & LÓPEZ, Francisco Javier

- 2018 Una crítica a la modernidad a partir de la 'inutilidad' del juego. El imperativo metanoético de Sloterdijk y la razón lúdica. *Reserca*, (23), 219-238. Recuperado de <https://tinyurl.com/tj8vj2a/>

GOYCOLEA, Mateo

- 2017 Sobre el concepto de humanismo: Heidegger y Sloterdijk. *Crítica.cl*, 1-12. Recuperado de <https://tinyurl.com/ydfccxnm/>

HERMANUS, Jos

- 2013 Fundamentos, concepciones, dilemas y proyecciones de la hermenéutica. *Sophia, Colección de Filosofía de la Educación*, (15), 34-84. Recuperado de <https://tinyurl.com/vckyohd/>

HUERTA, Raúl

- 2016 *Esferología, política y guerra en Peter Sloterdijk: para una aphrología de la Guerra de Cuarta Generación* (Tesis de maestría, Universidad Iberoamericana). Recuperado de <https://tinyurl.com/y5n7ol8y/>

MARTÍNEZ, Margarita

- 2010 La vejación a través de las máquinas. El concepto de artificio en Peter Sloterdijk. *Revista Iberoamericana de Ciencia, Tecnología y Sociedad*, 5(14), 1-8. Recuperado de <https://tinyurl.com/ya5kx7z5/>

MARTORELL, Francisco

- 2013 El pesimismo antropológico de Peter Sloterdijk en Normas para el parque humano. *Eikasia*, 171-179. Recuperado de <https://tinyurl.com/yd4zycvz/>



MÉNDEZ, Carlos

- 2013 Peter Sloterdijk: pensar al hombre en una época posthumanista. *Revista Guillermo de Ockham*, 11(2), 173-185. Recuperado de <http://tinyurl.com/y42q56b3/>

OGAZ, Leonardo

- 2012 La dialéctica como contribución para el desarrollo del pensamiento. *Sophia, Colección de Filosofía de la Educación*, (12), 84-104. Recuperado de <https://tinyurl.com/r32lwzf/>

PAREDES, Diana

- 2016 Las antropotécnicas desde Peter Sloterdijk: la ingeniería genética y la información como técnicas para la mejora del hombre contemporáneo. *Revista de Investigaciones UCM*, 16(27), 148-157. Recuperado de <https://tinyurl.com/rw3qw19/>

REYES, Carlos

- 2019 Los temperamentos filosóficos de Peter Sloterdijk: una lectura psicopolítica a su pensamiento. *Praxis Filosófica*, (48), 199-221. Recuperado de <https://tinyurl.com/yyz28kv9/>

RINCÓN, Luis

- 2014 Fingo Ergo Sum: poesía y filosofía en Peter Sloterdijk. *Eidos*, (20), 311-328. Recuperado de <https://tinyurl.com/y5ex5djj/>

RÍOS, Antonio

- 2013 Peter Sloterdijk: optimismo social ilustrado, regímenes de seres ejercitantes y transcapitalismo. *Observaciones Filosóficas*, (15), 1-26. Recuperado de <https://tinyurl.com/w24lyo2/>

SLOTERDIJK, Peter

- 2000 *Un pensamiento punzante*. Recuperado de <https://tinyurl.com/yc32ovur/>
 2001 *Sin salvación: tras las huellas de Heidegger*. Madrid: Akal.
 2003 *Crítica de la razón cínica*. Madrid: Siruela.
 2006a *El hombre operable: notas sobre el estado ético de la tecnología génica*. Recuperado de <https://tinyurl.com/y5rzz36c/>
 2006b *Esferas III*. Madrid: Siruela.
 2007 El arte se repliega en sí mismo. *Revista Observaciones Filosóficas*. Recuperado de <https://tinyurl.com/t5r6vf5/>
 2010 *Ira y tiempo*. Ensayo psicopolítico. Madrid: Siruela.

SORDO, Juan & GUZMÁN, Ricardo

- 2013 Cultura y política en el proyecto filosófico de Peter Sloterdijk. Limitaciones y potencialidades de su esferología. *Desacatos*, (41), 139-154. Recuperado de <https://tinyurl.com/y97lt2sy/>

VALENZUELA, Fernando

- 2014 Las formas del arte en la teoría de Niklas Luhmann. *Contenido: Arte, Cultura y Ciencias Sociales*, (4), 9-21. Recuperado de <https://tinyurl.com/y2p2xm33/>



TECHNO-SCIENCE AND CONSILIENCE AS AN AGENDA FOR THE PHILOSOPHY OF TECHNOLOGY

Tecnociencia y consiliencia como una agenda para la filosofía de la técnica

JOSÉ LUIS GUZÓN NESTAR*

CES Don Bosco, Universidad Complutense de Madrid, España
joseluis.guzon@salesianos.es

Orcid Code: <https://orcid.org/0000-0002-1526-5058>

Abstract

The article addresses a novel topic that has recently had very diverse treatments. Some of its objectives could be the following: it aims to point out some of the paths taken in the dialogue between science and technology over the last few decades and briefly describe the milestones that have led from classical (Newtonian) science to current techno-science. In the background, also offer a few brushstrokes on the new philosophy of technology, which is built apart from old humanist prejudices, which has the theoretical development of consilience and does not want to be directed primarily or exclusively towards engineering. In short, a philosophy of technique with a new 'agenda'. The work has large blocks: the first describes the project of techno-science in its historical perspective. In a second moment, the aim is to situate technique in the history of sciences and techniques. The third part deals with the possibility (and also the need) for a new vision of these subjects, which has been called a sapiential and transdisciplinary vision. Finally, in the fourth part, some steps are being taken in the field of technical philosophy under this new perspective, which could be considered as conclusions, the new 'agenda': the emergence of ethical approaches (among others, that of responsibility) and new visions of science-technology-society.

Keywords

Consilience, technoscience, Big Science, philosophy of technology, STS (Science Technology and Society).

Suggested form of citing: Guzón, José Luis (2020). Techno-science and consilience as an agenda for the philosophy of technology. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 91-114.

* Phd. in Philosophy. Phd.in Dogmatic Theology. Diploma in Cinematography. Master in Environmental Management. He has been director of the Higher Institute of Philosophy of Burgos (2006-2012), of the Ibero-American Thought Institute (UPSA) (2013-2016) and of the Family Institute (UPSA) (2013-2016). He has directed numerous journals, among which Think and Educate, Family and Education and Future. His main research project revolves around the theme of time in philosophy and theology, although he has addressed numerous educational and philosophical-theological issues. He currently teaches at CES Don Bosco, a center affiliated with the Complutense University of Madrid, and at the San Pío X Institute, at La Salle University, in Aravaca.

Resumen

El artículo afronta un tema novedoso que ha tenido recientemente tratamientos muy diversos. Algunos de sus objetivos podrían ser los siguientes: pretende señalar algunos caminos realizados en el diálogo entre ciencia y técnica a lo largo de las últimas décadas y describir sucintamente los hitos que han conducido desde la ciencia clásica (newtoniana) a la tecnociencia actual. En el fondo, ofrecer también unas pinceladas sobre la nueva filosofía de la técnica, que se construye apartando viejos prejuicios humanistas, que cuenta con el desarrollo teórico de la consiliencia y que no quiere estar dirigida ni principalmente ni exclusivamente hacia la ingeniería. En definitiva, una filosofía de la técnica con nueva 'agenda'. El trabajo tiene cuatro grandes bloques: en el primero se describe el proyecto de la tecnociencia en su perspectiva histórica. En un segundo momento se pretende situar la técnica en la historia de las ciencias y de las técnicas. La tercera parte aborda la posibilidad (también necesidad) de una nueva visión de estos temas, que se ha dado en llamar visión sapiencial y transdisciplinar. Finalmente, en la cuarta parte, se señalan algunos pasos que se están dando en el campo de la filosofía de la técnica bajo esta nueva mirada, lo que podrían ser consideradas como las conclusiones, la nueva agenda: irrupción de enfoques éticos (entre otros, el de la responsabilidad) y nuevas visiones de ciencia-tecnología-sociedad.

Palabras clave

Consiliencia, tecnociencia, Big Science, filosofía de la técnica, STS (ciencia, tecnología y sociedad).

92



Introduction

The history of the relationships between sciences and techniques is very complex and has been the subject of many studies and perspectives (both historical and thematic). Some have described the technique as applied science (Mario Bunge). Others have reduced, at least at some point, science as a mere instrument of technique (perhaps Martin Heidegger, Nicholas Resher, perhaps Javier Echeverría). This reduction has sometimes been able to conclude in a total identity. For some, this would be the complex techno-science itself (S. Lelas, M. Bunge, etc.).

The article aims to show how to see techno-science on a broader horizon that includes autonomy or independence and at the same time mutual interaction.

Some of its objectives could be elucidated as follows: we aim to point out some paths made through the dialogue between science and technology over the last decades and succinctly describe the milestones that have led from classical (Newtonian) science to current techno-science. At the same time, bring within the reach of philosophers and historians of science some brushstrokes on the new philosophy of technique, which has been built on a constant departure from old humanist prejudices, which has always had the theoretical development of consilience and that does not want to be directed, neither principally nor exclusively, towards engineering. In short, a philosophy of technique with a new 'agenda'.

The word “consilience” is quite novel and snobbery—you might say—and does not appear in the scientific literature until very recently. It was coined in the twentieth century and refers to long-standing separate research fields that come together to create new ideas, establish creative synergies, as has happened in some fields of contemporary science, for example, in molecular biology, the result of the convergence of two major disciplines such as chemistry and genetics.

This article has four parts: the first describes the technoscience project in its historical perspective. In a second moment, we intend to place the technique in the history of science and technology. The third part addresses the possibility (also need, to a large extent) of a new vision of these issues, which has been called the transdisciplinary knowledge and/or perspective. Finally, in the fourth part, some steps are being taken in the field of technical philosophy under this new look, which could be considered as the conclusions, the new ‘agenda’: irruption of ethical approaches (between others, that of responsibility) and new visions of science-technology-society.



The techno-science project

Techno-science is a recent discipline, but with deep roots in the history of ideas, which collects and attempts to respond to the debate about the separation between science (theoretical) and technology (practice), especially maintained by philosophers. The emphasis that the term techno-science puts on technology, as well as the intensity of the connection between science and technology, varies. In addition, most scientists and philosophers of science continue to externalizing technology as applications and consequences of scientific progress. However, they recognize that the success and efficiency of technology promote the realism, objectivity, and universality of science.

The prehistory of the technoscience concept dates back, at least, to the beginning of modern science. Francis Bacon (1561-1626) in *Novum Organum Scientiarum* explicitly associated knowledge and power; science provided knowledge of the effective causes of the phenomena and, therefore, the capacity for efficient intervention within them. Bacon was the first great thinker to describe how science should be done and explain why. Scientific knowledge should not be gathered by itself, but for the practical benefit of humanity. Finally, Bacon promoted experimentation,

getting to outline and define the rigorous procedures of the ‘scientific method’ that today, with small variations, remain in force.

The concept became clearer during the first half of the twentieth century. Gaston Bachelard (1884-1962), in *Le nouvel esprit scientifique* (1934), places the new scientific spirit under the preponderant influence of mathematical and technical operations and uses the technique of scientific expression to designate contemporary science. However, the term techno-science itself was not coined until the 1970s.

We intend to point out some paths made in the dialogue between science and technology throughout recent times and succinctly describe the great milestones that have led from classical (Newtonian) science to current techno-science, including some of its latest developments. In the end, also offering some brushstrokes on the new philosophy of technique, which is built away from old humanistic prejudices, which has the theoretical development of consilience and does not want to be directed, either principally or exclusively, towards engineering. In summary, a philosophy of technique with a new agenda.

The history of techno-science

The first important appearance of the term takes place in the title of the article “*Ethique et technoscience*” by Gilbert Hottois, first published in 1978 (Hottois, 1996, 1999; cf. Agora, 2005, pp. 149-175). This first use expresses a critical reaction against the theoretical and discursive conception of contemporary science, and against blind philosophy towards the importance of technology. Associate technoscience with the ethical question: What are we going to do with human beings? Raised from an evolutionary perspective open to technical intervention.

Throughout the 1980s, two French philosophers, Jean François Lyotard and Bruno Latour, contributed to the dissemination of the term in France and North America. For Lyotard, technoscience carries out the modern project of the human being, as argued from the work of René Descartes (1596-1650), as master and possessor of nature. This project has become very technocratic and must be denounced because sometimes it is politically associated with radical capitalism.

In *Science in Action* (1987), Latour uses the plural ‘technosciences’ to underline his empirical and sociological approach. Technosciences refer to those sciences created by human beings in real-world socio-economic and political contexts, by conflicts and alliances between humans and also between human and non-human (institutions, machines and ani-



mals among others). Latour insists on networks and hybrid mixtures. He denounces the myth of a pure science, rejecting any philosophical idea of a science that is supra or extra social and apolitical. Latour has contributed to the success of the term technoscience in the socio-constructivist discussion since the 1990s.

Donna Haraway's work¹ illustrates well the diffusion of technoscience mixed with the postmodern and socio-constructivist discussions of North America. Technoscience becomes a word-symbol of the contemporary tangle of processes and interactions (science, technology, societies, etc.), including all kinds of elements, from purely symbolic practices to the physical processes of nature in global networks, productions and exchanges.

In continental Europe and in Latin American countries, the use of the term technoscience has often remained closer to its original meaning, which implies the ontological (such as the German philosopher Martin Heidegger, 1889-1976), the epistemological and the ethical questioning. In fact, in a perspective that complements what I have provided here, in *The Technoscientific Revolution* (2003), Javier Echeverría offers an extensive analysis of technoscience as a concept and phenomenon. However, political use is not uncommon, especially in France, where there is a tendency to attribute to technoscience a series of contemporary evils such as technicality and technocracy, multinational capitalism, economic neoliberalism, pollution, the depletion of natural resources, climate change, globalization, planetary injustice, disappearance of human values, and more, all related to US imperialism.

The common archetype of technoscience is Big Science,² originally exemplified by the Manhattan Project (Guerrero and Vega, s/f), which closely associated science, technology and politics. In this interpretation, technoscience is presented from the point of view of domination and control, and not from exploration, research and creativity. It is technocratic and totalitarian, not technopoietic and emancipatory.

Questions

What distinguishes contemporary science as technoscience is that, unlike the philosophical enterprise of science identified as a fundamentally theoretical activity, it is physically manipulative, interventionist and creative. The determination of the function of a gene, either to create a drug or to participate in the sequencing of the human genome, leads to the realization of technoscientific knowledge, power, and capacity. In a



technoscientific civilization, the distinction between theory and practice becomes blurred. Philosophers are invited to define human death or birth taking into account the consequences of these definitions in ethical-practical plans, that is, with respect to what will be allowed or not allowed (for example, the removal of organs or embryos) in experimentation.

With great clarity in the *Techno-scientific revolution* (2005), Javier Echeverría states:

Where there has been a radical change is in the scientific activity, in the very structure of what scientists and engineers do and it is manifested in research, development, and innovation. That is to say, it is not only about research, but technological developments that result in innovations that are put into practice in the market, in the business, in society (p. 19).

96



Another very familiar example, especially for bioethics specialists, is that of experimental mice. Since the 1980s there has been a line of transgenic mice (*oncomouse*)³ used as a model for research on certain cancers. Here is an object both natural and artificial, theoretical and practical, abstract and concrete, alive and patented as an invention. Its existence and use in research also implied many different scientific and cognitive issues and interests: therapeutic, economic, ethical and legal. It is even a political problem because transgenic mice are at the center of a conflict between the European Union and the United States over the patentability of living organisms.

The most radical questions posed by techno-sciences have to do with their application to the natural (as a living organism formed by the evolutionary process) and to the manipulated (as a contingent creation of human culture). These questions become more rigorous when considering the immensity of biological, geological and cosmological temporality, as when asking: What will become of the human being in a million years? From this perspective, the investigation of human beings seems open not only to the symbolic invention (definitions, images, interpretations, values) but also to the techno-physical invention (experimentation, mutations, prostheses, cyborgs). Both approaches raise questions and responsibilities that are not alien to ethics and politics and ie should look at them critically.

Therefore, the word technoscience designates a complex network of contemporary science and technology, which has a special conceptual burden. Medina clarifies this aspect in his article “Technoscience, challenges, models” (2003):

In the field of science and technology, systems, subcultures and traditions correspond to specific cultural practices and legacies, embodied in the capabilities of the agents and in the material, symbolic and organizational environments of each scientific and technological field. These practices and environments, as well as the characteristic modes of innovation and stabilization of modern sciences and technologies, are fundamentally distinguished by their techno-scientific character, that is to say, by practices and environments in which the elaboration of precise conceptual and technical devices and the production and use of sophisticated artifacts and technological procedures intervene and interact. The same technologies constitute complex systems of artifacts and techniques that have been generated and stabilized in the context of theoretical and material practices and environments of a scientific nature. The framework between scientific systems and modern technological systems is so inseparable in practice that the use of the term technoscience to characterize current scientific systems and, in general, scientific traditions has been widespread since at least the end of the 19th century. (p. 25).



The complex interactions between science, technology, society and nature form an inseparable unit of fact and a network that can only be addressed in global and transdisciplinary studies. In a succinct way, with the help of Luis Silva Arriaga (2012), the characteristics of technoscience could be synthesized as follows:

- Descriptive, explanatory and predictive. Because it tries to describe the phenomena it studies explaining how they work and anticipating how these phenomena will behave in the future.
- Methodical and systematic. Because it follows certain guidelines or methods to account for its research and is articulated within a system of theories that support it.
- Verifiable. Since its theories and methods are public.
- Clear and precise. Because the explanations must be exempt from all ambiguity.
- Objective. To avoid by all means the subjective vision of the researcher.
- Provisional. Because the knowledge tested today can be refuted tomorrow by superior knowledge.
- Critical. To permanently question the provisional knowledge that has not yet been refuted (p. 2).

Technique on the horizon of the history of science and techniques

Since Antiquity (it would be necessary to go back to Greek thought), but more noticeably since the scientific revolution of the 16th and 17th centuries (Modernity), humanity has been strongly influenced by science. The prestige achieved by science has given it the role of the most important rationality and catalyst of social change.

Above all, modern science is constituted as a clear and precise project, especially since Newton. It is not that it wasn't definitively configured from the beginning, but it is a century later, with the powerful influence of the Laplace school, when Newton, the new Moses, becomes the symbol of the European scientific revolution. It will definitely be the 19th century that gives Newton's name a magical and exemplary power in which all science tends to converge. Some see in his method an idea of a mathematical experience protocol. For others, the central idea is to isolate a specific fact from which everything can be deduced. Each one makes his own hypothesis of the value of the Newtonian doctrine, although all recognize that some of the dynamic concepts that Newton has introduced constitute a definitive acquisition, and, even for some, as for his disciple Pierre Simon de Laplace (1749-1827), an unbeatable roof.

The strength of Newtonian synthesis is/was incredible. The common aspirations to the science of all time, the desires of unified science, are collected and grouped, although its final resolution is never reached, since the questions that are at the base never lose their generating force.

He shares with the mythical stories the attempt to explain and interpret the organization of the world and the situation of human society in the midst of nature, but it departs from the mythological question when it comes to verification procedures and critical discussion. However, philosophy and science often carry parallel or even convergent discourses, even though they are both discourses of a critical nature.

For some, the uniqueness of modern science is characterized by an experimental dialogue, by the encounter between technique and theory, the systematic 'alliance' —again the keyword (Prigogine and Stengers, 1990a, pp. 29-48; cf. 1990b)— between the ambition to model the world and to understand it. It is true that this relationship did not bring only advantages. The experimental dialogue founded the originality, the specificity and the limits of science, but at the same time, it was put before a simplified nature, prepared, sometimes mutilated according to the previous hypothesis, the one which experimentation interrogates.



This science, due to its intrinsic dynamics and the sociocultural circumstances that surrounded it at the time of its birth, becomes a myth and thusly has remained until the second half of the twentieth century. The theoretical content of classical science has contributed, without any doubt, to stabilize the myth of omniscient knowledge.

The Newtonian laws of the movement make a synthesis that had been projected for some time between two convergent developments. As Prigogine and Stengers (1990a) point out: “The one of physics —the description of the movement, with the laws of Kepler and those of the fall of the bodies formulated by Galileo— and that of the mathematics that culminates in the ‘infinitesimal’ calculation” (p. 228). With the concept of the infinitesimal quantity, they have a powerful instrument in their hands. The infinitesimal quantity, which results from a step to the limit and is defined as the variation of magnitude between two successive instants when the interval between the instants tends to zero, allows to describe, decompose the change, into an infinite series of small fields.

From now on, whatever the dynamic system, the shape of the laws of motion, $F = m \cdot a$, remains valid. This formula has three characteristics: legality, determinism, and reversibility. This reversibility is linked to the principle of sufficient reason, according to Prigogine and Stengers (1990b):

The impossibility of defining an intrinsic difference between before and after, to which dynamics is condemned, is evident to us today, but, already in its origin, it was both affirmed and concealed by a principle that, with the works of Galileo, Huyghens, Leibniz, Euler, and Lagrange, became the very principle of conceptualization of dynamics. Leibniz baptized it as “principle of sufficient reason.” In Leibnizian terms, this principle states the equivalence between the “full” cause and the “total” effect (p. 281).

But today it can be affirmed that the Golden Age of Newtonian science is over and that its rationality is not enough to unify knowledge. The imp of Laplace lacks two dimensions that currently seem indispensable for the understanding of the world: complexity and history.

The second half of the twentieth century offered, among others, a special, different image of science. It is what is called technoscience. This is characterized by the fact that there is no scientific progress without technological advancement and vice versa. The interdependence between science and technology is very narrow in the case of Big Science, and that is why it is convenient to distinguish between science, technique, technology, and technoscience.



Although science became hegemonic and sometimes despotic — as a consequence of the force it reached— the second half of the 20th century and the beginning of the 21st have meant a radical change for the consideration of almost all things, especially science. It could not be considered as an autonomous discipline, but rather, a mixture of various value systems that are deeply interwoven with each other and that can be described with these two statements:

- The philosophy of science cannot be limited to being a theory of scientific knowledge.
- The emergence of technoscience has changed the praxis of scientists and engineers.

100



But what is this discipline that is the object of study? The title of the work of Alan Francis Chalmers (1988) *What is that thing called science?* which also had such importance in our culture, now serves as an epigraph to deal with a definition of science.

It is not easy to define science —Agustín Udías says (2010, p. 20)— . The American Physics Society set out to arrive at a definition, but after the attempt, it gave up on its purpose. The definition closest to the ideal they pursued is the following, according to Udías (2010): “A disciplined search to understand nature in all its aspects [...] demanding an open and complete exchange of ideas and data [...] and an attitude of skepticism about its own results” (pp. 20-21).

A new sapiential and transdisciplinary view

What is understood by the sapiential view? The qualifying sapiential almost always refers to an integrating and overcoming vision with respect to those at the base. In this context, talking about a sapiential view of science means that it must be accompanied by a well-founded philosophical worldview. Now it is understood that technoscience, that is, the new scientific conception that combines technology and science, implies a reference to a philosophical system from which it is allowed to talk about values and other elements that emerge from a philosophical conception.

In the encyclical *Fides et Ratio* (1998), John Paul II also spoke of a “sapiential dimension”, in this case of philosophy and theology. There it is stated that:

To be consonant with the word of God, philosophy needs first of all to recover its *sapiential dimension* as a search for the ultimate and ove-

rarching meaning of life. This first requirement is in fact most helpful in stimulating philosophy to conform to its proper nature. In doing so, it will be not only the decisive critical factor which determines the foundations and limits of the different fields of scientific learning, but will also take its place as the ultimate framework of the unity of human knowledge and action, leading them to converge towards a final goal and meaning. This sapiential dimension is all the more necessary today, because the immense expansion of humanity's technical capability demands a renewed and sharpened sense of ultimate values. If this technology is not ordered to something greater than a merely utilitarian end, then it could soon prove inhuman and even become potential destroyer of the human race.

In a similar way, one can extrapolate and say that ethics (philosophy) and sciences are called for greater integration and ethics can become that guiding discipline that drives sciences and techniques (technosciences) towards a definitive objective and meaning. This is what our "sapiential view" could, in the first instance, consist of.

The heading refers to another qualifier: transdisciplinary. What is a transdisciplinary relationship? In history, there have been many models of the relationship between disciplines. There are two broad categories in the models of relationship between the human sciences and theology: of a conflictive type (tension, exclusion, separation, closure or mutual ignorance) or of peaceful coexistence, characterized by a more or less stable balance between the partners (cohabitation, commitment, concord, reciprocal openness, and dialogue).

There are two types of dialogue: multidisciplinary and interdisciplinary (transdisciplinary). The multidisciplinary is that type of dialogue through which the representatives of both sciences become both listeners, receivers, and informants, based on a more complete knowledge of a common field of research. What does it require? Five characteristics necessary for a dialogue relationship can be identified:

- It requires that the two disciplines want to dialogue, and are interested in exchanging information (to which each discipline comes with its method).
- It is also necessary for both to give up the claim —almost always existent, although sometimes unconscious— to consider their discipline as the only valid scientific approach to reality. They must be open to what the other party can contribute.



- The dialogue must take place under the sign of provisionality. Both disciplines are contested; therefore, we must realize the provisional reality.
- Dialogue and confrontation should not occur on the abstract level, but in their concrete historical realizations.
- The other partner is also required to be able to understand the scientific procedures and the specific language of the other science.

The interdisciplinary dialogue adds only one novel fact to the previous one and is that of a greater relationship and overlapping of the various sciences. When the relationship allows for deeper exchanges, such as the use of common concepts, we are in the transdisciplinary field. For a dialogic relationship of these characteristics between sciences to be possible, the production of trans-specific concepts must occur (cf. Piaget, 1989; Groppo, 1991).

It could be concluded by trying to clarify if any philosophy serves to grant that sapiential view to science. The answer is flatly negative. Not all philosophies serve to offer a sapiential view, because many philosophies do not start from assumptions like those explained above, well defined and with the will to converge on common goals and objectives.

Consilience

Edward Osborne Wilson, distinguished professor emeritus of biology at Harvard University and recognized as, perhaps, the world's leading ant authority, opened a new field of science in the 1970s with his book *Sociobiology: The New Synthesis* (1975). He argued that social animals, including humans, behave largely according to the rules written in their own genes. The theory caused controversy because not only did it seem to contradict the precious beliefs about free will, but, according to critics, it evoked those racist ideologies of some human groups being biologically superior to others. The reactions were controversial. However, Wilson and some followers have defended and refined sociobiology over the years to such an extent that it is now a concept that is widely accepted in the scientific community, especially by a new generation of evolutionary psychologists. After many years, Wilson has offered us a new, potentially innovative book, *Consilience: The Unity of Knowledge* (1998), which has placed him at the center of debate and controversy once again. Some scholars have praised him as bold and provocative, while others have criticized him as intellectually unstable and poor.



The word “consilience” is strange and does not appear in *Webster’s New World Dictionary* or in other famous dictionaries. As already said, it was coined in the last century and refers to long-standing separate research fields that come together and create new ideas (chemistry + genetics = molecular biology). The controversy surrounds Wilson’s belief that every human effort, from religious sentiments to financial markets and fine arts, is likely to be explained by hard science. Philosophers and artists get angry at what Wilson calls his “unification agenda,” his attempt to show—as he said—that the greatest enterprise of the human mind has always been and will be the attempt to link science with the humanities.

The essence of Wilson’s argument in his book *Consilience* is that the scientific method can be successfully applied to the humanities and social sciences. In fact, the seemingly divergent disciplines of natural sciences and social sciences study the same world and, therefore, there should be a way to reconcile differences in progress in the two areas of study.

Some ideas of Wilson (1998) are rooted in the Enlightenment. He specifically quotes Marie-Jean-Antoine-Nicolas Caritat, Marquis de Condorcet (1743-1794), to whom he also attributes the incorporation of the spirit of the times: “The universe, known or unknown, is necessary and constant. Why should this principle be less true for the development of the intellectual and moral faculties of man than for other operations of nature?” (P. 21).

It should be remembered that this concept had previous circulation. The word consilience was originally coined in terms of “consilience of inductions” by William Whewell (1794-1866) (consilience refers to a “jumping together” of knowledge). The word comes from the Latin *com* (together) and *siliens* (jumping)—as in resilience—.

Wilson (1998) argues that nothing in the world makes sense unless there is a theory to explain it (p. 56). This theory is provided by science, which is the “organized and systematic enterprise that gathers knowledge about the world and condenses knowledge into verifiable laws and principles” (p. 58). For Wilson, the fact that science produces useful laws about the world, in general, is the main attraction of disciplines.

From this desire to generalize both the sciences and the humanities in a unitary formula to find objective truth, the doctrine of logical positivism emerged. The objective of this tension of thought was to unify the scientific method with that of the humanities and, according to Wilson (1998), its failure was caused only by the lack of knowledge of neuroscience (p. 67).





This attempt at unification has been at the base of other claims such as that of Ilya Prigogine and Isabelle Stengers (linking humanities and sciences through a new concept of time, *The Nouvelle Alliance*, 1978), Charles Percy Snow (The Two Cultures, 1959) and Edward Osborne Wilson himself (*Consilience: The Unity of Knowledge*, 1998). Each attempt brings new tools, but even in the midst of progress, the ultimate goal of the unification of knowledge is perceived far away.

In part, the difficulty arises when describing complex systems, since dissection is easier than building something new; It is easier to separate a group of ideas to see why they should work together instead of visualizing all the ideas in the sequence that leads to our current knowledge base. In fact, many of the problems of the social sciences arise from the simplification of the problems beyond the point at which the theory that arises, as a result, is useful. Human interactions are immensely complicated and are not adequately explained by the hypotheses of social scientists.

This does not mean that the natural world is not complex. The interaction and evolution of species are complex and iterated games that are difficult to analyze. There are too many variables that influence, for example, genetic evolution. However, according to Wilson (1998), genes and culture are inseparably linked, there is no way to have one without the other (p. 138).

The crux of his argument is that everything can be reduced to simple physical reactions at the molecular level (p. 291). In essence, both natural sciences and social sciences study situations that arise from the same interactions. The goal of consciousness is environmental conservatism since the unification of the two disparate worlds of study will lead to a greater understanding of man's place in the world and its effect on it. Science has the ability to understand and remedy environmental problems, but only the humanities and social sciences have the ability to reach a group large enough for these advances to take place.

Wilson's goal is noble, but his examination of the current state, both of the social sciences and the arts is insufficient. Specifically, his examination of economic thought leaves much to be desired. However, he acknowledges that, although there are very simple parts of economic theory, there are others, such as the theory of social choice, that are dense and complex and that, in any case, the failure of social sciences to predict human behavior will not be due to any lack of competence on the part of scientists, but because of the unpredictability of the human condition.

Beyond epistemological and humanistic prejudices

The technique, the techniques, have been marginalized throughout the history of ideas until not long ago. The origin of this marginalization should be sought in the philosophical tradition that from the beginning separated *techné* and *episteme*, *poiesis* and *praxis*. Plato and Aristotle would be at the base of this dichotomous separation that brought strong consequences for the understanding of a science and a technique and technology in good relations. Thus, according to Manuel Medina (1995):

The theoretical separation of the technique with respect to science and the humanities configures the philosophical prejudices that have accompanied the long history of philosophy and its relations with the technique, even marking the modern philosophy of technology and facing different currents within it. Overcoming these prejudices, both in the philosophy of technology and in the philosophy of science, involves the integration of both into a philosophy of technoscience, within the current interdisciplinary studies of science and technology (p. 180).

105



Aristotle himself in the fourth chapter of Book VI of the *Nicomachean Ethics* (1987) offers us both epistemological and philosophical prejudice. For him “all *techné* is the ability to produce material objects in accordance with a true *logos*” (p. 272). For many authors, here we would find the ‘epistemological prejudice’ (*meta logou alethous*), that is, the *techné* is subordinated to the *episteme*, but also the foundations are laid, after the separation between technique and knowledge or theory, of the primacy of theory on praxis (‘philosophical prejudice’).

The later history is well known. Until the late nineteenth and early twentieth centuries, there has been no notable development of the philosophy of technique capable of reorganizing these contents in another way. Some significant figures in this intellectual process were Karl Marx, Ernst Kapp (*Grunlinieneiner Philosophie der Technik*, 1877), Friedrich Dessauer (*Philosophie der Technik*, 1927), José Ortega y Gasset (*Meditation of the technique*, 1939) and Martin Heidegger (*Die Frage nach der Technik*, 1954).

The philosophy of technology as such arises in the 60s and 70s of the 20th century: Joseph Agassi, Mario Bunge, Lewis Mumford, Henryk Skolimowski, Paul Durbin, Friedrich Rapp... from that time to the present it would be very difficult to recount the history of everything that has happened, given the plurality and heterogeneity of approaches, but it is possible, following Manuel Medina (1995), to affirm that there are two great blocks: a humanistic approach and another of more analytical and

epistemological character. The truth is that even in these new approaches the old prejudices that have been talked about remain.

From the new studies of the philosophy of technology, the result of a 'technological turn'⁴, appreciable in our culture and that reverses the old assumptions and prejudices about the relations between technology, science, and society (Achterhuis, 2001, p. 190), the first fruits have been produced. In prehistory, John Dewey can be placed (cf. Hickman, 1990). According to Larry Hickman (1990), Dewey had a clear interest in technology. He went unnoticed in many later authors because he did not dedicate a monographic book to this issue, but he is certainly at the foundation on some of the arguments that ended the primacy of the theory of praxis in the philosophy of science and technology (Esteban, 1999, p. 138).

Other significant authors are Paul Lorenzen (1974), promoter of the systematic constructive theory of science. From philosophy, Ian Hacking (1999), who has been unchecked from analytical prejudices to approach a more technology-focused vision. From the field of sociology of science, Andrew Pickering (1995) proposes a post-humanist analysis of scientific practice.

I conclude with Medina (1995), who has served as a guide on this tour, stating that:

In any case, if the philosophy of science and the philosophy of technology are to have a future that is to become part of the already well-stocked philosophical museum, they will have to overcome the old prejudices both humanist and epistemological, to integrate interdisciplinarily into current science and technology studies. Meanwhile, we should start by integrating both into a post-epistemological and post-humanist philosophy of technoscience, in accordance with the principle that what comes together in practice and culture should not be academically separated (p. 194; cf. Ihde, 1991).

Beyond an engineering-oriented technology

Contemporary technological philosophy oriented towards society evaluates technology in a broader way than the ethics of technology. However, it also lacks a developed theory of value, whereby the different aspects that are at stake in relation to technology can identify and balance each other. Therefore, it should be noted that current approaches also have their limitations to address the first question, regarding the nature of technology and engineering. However, it mainly concerns technological ethics and the philosophy of society-oriented technology.



It should also be borne in mind that the field would benefit greatly from the development of value theories specifically oriented towards technology, distinguish different types of value, relevant to assess the consequences of technology and analyze how such values are promoted or hindered through the design and use of technologies, artifacts, and processes.

A second way in which the philosophy of technology has not advanced much is that various philosophical studies that focus on the implications of technology are not based on developed theories of society and its interaction with technology.

In general, what is needed in this field is a greater number of theories developed to study how technological artifacts interact with aspects of society, as well as better reports of these social phenomena themselves. These theories can be taken from STS (Science, Technology & Society) or other social sciences (in line with the 'empirical turn'), or imported from a general philosophy, but we must keep them more present in our work (cf. Stirling, 2007).

Third, it is possible to consider some limitations that are specific to current technological ethics. Most importantly, there is a great lack of reflection in the general ethics of technology, as opposed to the applied ethics of specific technologies. Properly, very little work is being done to advance in the field of the ethics of theoretical or methodological technology. The 'empirical turn' has not yielded a single paper on technological ethics that presents theories and methods to address the field.

Another related criticism is that very little work is being done to address the question of how new technology can be developed in a morally responsible manner. On the one hand, technology ethics focuses mainly on ethical and social issues related to existing technologies and, on the other, on the overall responsibilities of engineers.

What is missing are effective models that allow us to evaluate how the accepted norms and values can be taken into account when developing new technologies and how to anticipate moral and regulatory problems with respect to future applications. That is, what is missing are effective models for the ethical evaluation of technology and for the ethical development of new technology.

Finally, it is worth expressing some concern about the possibility that the philosophy of society-oriented and engineering-oriented technology can be separated. The two approaches obviously have a theme that is very different, but both approaches can benefit from each other.

The philosophy of engineering-oriented technology develops theories of artifacts and technological practices, design processes and the



relationship between design and the use that can be made of the philosophy of technology-oriented society. The latter develops theories of society-technology relations that can be used by the former to include better descriptions of the social context of engineering. The hope is that these two approaches do not diverge, but rather interact and mix in those areas where there are common concerns (cf. Jaramillo, 2015, pp. 315-317).

Possible new agendas of the philosophy of technology or techno-science

What has been discussed in the previous section is that, despite the impressive achievements in the field over the past 25 years, there is still much room for progress. In what remains this article, some suggestions are made as to how the challenges posed can be accepted.

There are encyclopedias, such as that of *Ethical Science and Technology* of Mitcham (1985/2005). There are monographs with the classical approach, such as Hans Jonas (1995) *The Imperative of Responsibility*. But there seem to be no studies on general technology ethics after the 'empirical turn' and very few even with a focus on the applied forms of technology ethics.

Many of the new approaches that are on the horizon try to develop theories that allow for extensive evaluations of different technologies and technological practices based on ethical and unethical values. But for basing a serious philosophy of technology, a theory of value is needed that considers the relationship between technology and the realization of value. This theory would distinguish different types of values, such as ethical, aesthetic, cultural, social, economic, etc., but also the intrinsic and instrumental value adhered to technological artifacts and processes in society (cf. Echeverría, 2002).

Second, we must develop a view of how such values can be compared with each other. How to compare the value of security with that of privacy and determine which one is more important? How to compare the value of a strong economy with that of a clean environment?

Thirdly, consideration should be given to how values are materialized and promoted with technology. Can technological artifacts incorporate values and what other factors besides technology determine whether values are promoted or hindered when technologies are used? The third of these topics was addressed in theories of values in design as Helen Nissenbaum (1998) and value-sensitive design by Friedman and



Kahn (2003), and by Thomas Misa, Philip Brey and Andrew Feenberg in *Modernity and Technology* (2003), among others.

A second necessary improvement in the field that I identify is the development of more and better theories of the relationship between technology and society. An approximate distinction of two types of theories can be made. Theories of human-technology relations are theories at the micro-level that describe how human beings relate to and interact with technological artifacts or engage in technological practices (first). Theories of technology-society relations are theories that describe how products and technological practices relate to and interact with aspects of society (second). These are *macro* and *meso* level theories that describe, for example, how technological artifacts can influence political processes or how technological design processes interact with economic processes. Currently, there are few such theories in the field that have gained wide acceptance. There are some that are influential, such as the phenomenological theory of human-technology relations of Don Ihde (2004), the theory of the network of actors of Bruno Latour (2005), the theory of the politics of artifacts by Langdon Winner (1983) and the theory of technological rationalization by Andrew Feenberg (2009, 2013). However, these are theories that are oriented to specific issues and questions, and we need additional theories to cover new problems that arise.

To better understand human-technological relationships, theories of the interaction between artifacts and technological practices would be needed, on the one hand, human perception, cognition, action, experience, identity, body image, moral development, moral deliberation, human nature, and basic beliefs and values, etc. on the other. There are currently few such theories in the field and practically none that have widespread support.

To advance in this field, it is possible to prioritize the development of two types of theories of the relationship between technology and society. The first is the development of theories of technology agency: how do artifacts and technological practices affect the environment in which they are presented and used? How do they work to generate consequences? The second is the development of the theories of technology and Modernity: macro-level theories that relate the dynamics of technology with the basic structures and institutions of modern society (Feenberg, 2003).

The third and final challenge refers to technological ethics. In this field, there is a need for the development of theories and methods in various areas. It is necessary to understand how the use or presence of technology influence the moral dimensions of human action and individual responsibility. The pioneering work of Hans Jonas (1995), *The Imperative*



of *Responsibility*, is valuable for this purpose, but theories are needed that after the ‘empirical turn’ also address this issue.

These are exciting times to develop the philosophy of technology from the perspective of techno-science. Much progress has been made in recent decades and the field is maturing well. However, now is the time to take the field to the next level and strengthen theory and application. To grow more as a field of study, it should be demonstrated that there is more to offer than a series of interesting theories and points of view. It would be necessary to show or demonstrate that in this field there are many people who work together on joint problems, in which there is a constant dialogue about the best way to address them and in which people are aware and rely on the work of others.

These could be some of the brushstrokes of the philosophy of technology and its future agenda.

110



Notes

- 1 Technoscience studies from a feminist perspective are “a field under construction” (Åsberg & Lykke, 2010, p. 301).
- 2 Big Science was a major change in scientific practice: concentration of human and material resources in a few research centers; specialization of work in laboratories; development of scientific projects with political and social relevance, which contribute to increasing military power, industrial potential, health or national prestige; interaction between scientists, engineers, industrialists and military; bureaucratization and politicization of science and technology; loss of autonomy of science; high risk of its possible impacts; among others.
- 3 The *oncomouse* is one of the first transgenic animals that have been produced. Researchers at Harvard Medical School in the early 1980s produced a genetically modified mouse that was prone to cancer because an oncogene was introduced that can cause tumor growth. The *oncomouse* (from the Greek word meaning tumor) was conceived as a valid means of advancing cancer research. Harvard University tried to obtain patent protection in the US and other countries, however, as is logical, a wave of reflection on the ethical problems that arose soon developed (Rodríguez, 2007, pp. 25-40).
- 4 Technological turn or empirical turn, which will appear more times, is a term coined by Achterhuis and which refers to the change of epistemological approach to science and technology that has taken place in the last third of the twentieth century (cf. Achterhuis, 2001; Franssen et al., 2016; Verbeek, 2005).

Bibliography

ACHTERHUIS, Hans (ed.)

- 2001 *American Philosophy of Technology: the Empirical Turn*. Bloomington, Minneapolis: Indiana University Press.

ARISTÓTELES

1987 *Ética a Nicómaco*. Madrid: Gredos.

ÅSBERG, Cecilia & LYKKE, Nina

2010 Feminist technoscience studies. *European Journal of Women's Studies*, 17(4), 299-305.

CHALMERS, Alan

1988 *¿Qué es esa cosa llamada ciencia?* Buenos Aires: Siglo XXI.

ECHEVERRÍA, Javier

2002 *Ciencia y valores*. Barcelona: Destino.

2003 *La revolución tecnocientífica*. México: FCE.

2005 La revolución tecnocientífica. *Con-Fines* ½, agosto-diciembre, 10.

ESTEBAN, Miguel

1999 La ciencia como tecnología en John Dewey. *Revista de Filosofía Diánoia*, 45(45), 133-145.

FEENBERG, Andrew

2003 *Modernity and Technology*. Cambridge (MA): MIT.

2009 Rationalizing Play: A Critical Theory of Digital Gaming. *Information Society Journal*, 25(2), 105-118.

2013 Del esencialismo al constructivismo. La filosofía de la tecnología en la encrucijada. *Hipertextos*, 1(1), julio-diciembre. Buenos Aires.

FRANSSSEN, Maarten, VERMAAS, Pieter, KROES, Peter & MEIERS, Athonie (eds.)

2016 *Philosophy of Technology after the Empirical Turn*. Springer International Publishing.

FRIEDMAN, Batya & KAHN, Peter

2003 Human values, ethics, and design. En J. Jacko y A. Sears (eds.). *The Human-Computer Interaction Handbook*. Mahwah NJ: Lawrence Erlbaum Associates.

GROPPO, Giuseppe

1991 *Teologia dell'educazione: Origine, identità, compiti*. Roma: LAS.

GUERRERO, Manuel & VEGA, Victoria

s/f *El proyecto Manhattan: tecnología nuclear*. Recuperado de <https://bit.ly/2SnSLOK/>

HACKING, Ian

1999 *The Social Construction of What?* Cambridge (MD): Harvard University Press.

HICKMAN, Larry

1990 *John Dewey's Pragmatic Technology*. Bloomington, Indianápolis: Indiana University Press.

HOTTOIS, Gilbert

1999 *Essais de philosophie bioéthique et biopolitique*. París: Vrin.

IHDE, Don

1991 *Instrumental Realism: The Interface Between Philosophy of Science and Philosophy of Technology*. Michigan: Indiana University Press.

2004 A phenomenology of technics. En D. Kaplan (ed.). *Readings in the philosophy of technology* (pp. 137-159). Lanham (MD): Rowman & Littlefield.

JARAMILLO, Diego

2015 ¿Existe una filosofía de la ingeniería? *Universitas Philosophica*, 32(64), 315-317.



JONAS, Hans

- 1995 *El principio de responsabilidad: ensayo de una ética para la civilización tecnológica*. Barcelona: Herder.

JUAN PABLO II

- 1998 *Carta encíclica Fides et Ratio*. Vaticano: LEV.

LATOUR, Bruno

- 1987 *Science in Action. How to follow Scientist and Engineers through Society*. Cambridge (MA): Harvard University Press.
2005 *Reassembling the social: An Introduction to Actor-Network Theory*. Oxford University Press.

LORENZEN, Paul

- 1974 *Konstruktive Wissenschaftstheorie*. Frankfurt: Suhrkamp.

MEDINA, Manuel

- 1995 Tecnología y filosofía: más allá de los prejuicios epistemológicos y humanistas. *Isegoría*, 12, 180-197.
2005 *Tecnociencia*. Universidad de Barcelona. Recuperado de <https://bit.ly/2Q0G413/>

MITCHAM, Carl

- 1985/2005 *Encyclopedia of Science Technology and Ethics*. Nueva York: MacMillan.

NISSENBAUM, Helen

- 1998 Values in the Design of Computer Systems. *Computers and Society*, marzo, 38-39.

ORTEGA Y GASSET, José

- 1939 *Ensimismamiento y alteración: meditación de la técnica*. Buenos Aires: Espasa-Calpe.

PIAGET, Jean

- 1989 *Clasificación de las ciencias y principales corrientes de la epistemología contemporánea*. Buenos Aires: Paidós.

PICKERING, Andrew

- 1995 *The Mangle of Practice: Time, Agency, and Science*. Chicago, Illinois: University of Chicago Press.

PRIGOGINE, Ilya & STENGERS, Isabelle

- 1990a *La nueva alianza: metamorfosis de la ciencia*. Madrid: Alianza.
1990b *Entre el tiempo y la eternidad*. Madrid: Alianza.

RODRÍGUEZ, Eduardo

- 2007 Ética de la investigación en modelos animales de enfermedades humanas originales. *Acta Bioethica*, 13(1), 25-40.

SILVA, Luis

- 2012 *La tecnociencia*. Universidad Virtual del Estado de Guanajuato. Recuperado de <https://bit.ly/2SsCGhj/>

STIRLING, Andy

- 2007 A general framework for analysing diversity in science, technology and society. *Journal of the Royal Society Interface*, 4(15).

UDÍAS, Agustín

- 2010 *Ciencia y religión: dos visiones del mundo*. Santander: Sal Terrae.

VERBEEK, Peter

- 2005 *What Things Do: Philosophical Reflections on Technology, Agency, and Design*. Penn State University Press.



WILSON, Edward

1998 *Consilience. The Unity of Knowledge*. Nueva York: Knopf.

WINNER, Langdon

1983 Do Artifacts Have Politics? En D. Mackenzie *et al.* (eds.). *The Social Shaping of Technology*. Filadelfia: Open University Press.

Document receipt date: July 21, 2019

Document revision date: September 20, 2019

Document approval date: November 15, 2019

Document publication date: January 15, 2020



EDUCATIONAL CYBERNETICS, ACTORS AND CONTEXTS IN DISTANCE HIGHER EDUCATION SYSTEMS

Cibernética educativa, actores y contextos en los sistemas de educación superior a distancia

ANGÉLICA MARÍA RODRÍGUEZ ORTIZ*

Universidad Autónoma de Manizales, Colombia

amrodriguez@autonoma.edu.co

Orcid code: <http://orcid.org/0000-0002-7710-9915>

EDUARDO ISAAC CHÁVEZ CIBRIÁN**

Universidad de Guadalajara, México

Orcid code: <https://orcid.org/0000-0001-8682-5385>

e-mail: isaac.cibrian08@gmail.com

Abstract

Distance higher education take on big challenges in pursuit of the update of technological mediations that allow processes to be carried out of interactivity and social interaction, as well as before recognition of actors and context for the sake of to encourage the development of specific general competencies required by new professionals to meet the environment needs. This paper presents the partial results of qualitative research, whose objective was in identifying the role of actors and the context in distance education systems, for the sake of improving educational processes and find alternatives to close gaps between vocational training and the labour supply. To reach the objective was to carried out documentary analysis and the contributions of educational cybernetics were assessed for the sake of systematically understanding the processes of social interaction an interactivity that are carried out in this educational model. As results was found that educational cybernetics makes it possible to recognize actors and contexts, because it provides clarity on the composition of the systems that are articulated when it comes to training future professionals. It is also considered essential to recognize actors as human beings linked to a specific context, in which they take on challenges to transform the economic and social system with their work.

Keywords

Distance education, cybernetics, actors, context, social interactions, TIC.

Suggested form of citing: Rodríguez, Angélica & Chávez, Eduardo (2020). Educational cybernetics, actors and contexts in distance higher education systems. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 115-134.

* Researcher of the group: SEAD-UAM, line of research: Actors and contexts. Topics of research interest: Analytical philosophy, epistemology, social science teaching, distance education. Studies: Postdoctorate in Social Sciences, Arts and Humanities, CEA. Ph.D. in Philosophy. Master in Education and Bachelor of Philosophy and Letters.

** Bachelor of Philosophy. Student-researcher intern of the DELFÍN program (Mexico). Industrial chemical technologist, CETI-Tonalá.

Resumen

La educación superior a distancia asume grandes desafíos en pos de la actualización de mediaciones tecnológicas que permitan realizar procesos de interactividad e interacción social, así como ante el reconocimiento de los actores y el contexto en aras de favorecer el desarrollo de las competencias generales y específicas que requieren los nuevos profesionales para dar respuesta a las necesidades del entorno. El presente artículo presenta resultados parciales de una investigación cualitativa, cuyo objetivo consistió en identificar el papel de los actores y el contexto en los sistemas de educación a distancia, en aras de mejorar los procesos educativos y buscar alternativas para cerrar brechas entre la formación profesional y la demanda laboral. Para alcanzar el objetivo se realizó un análisis documental y se valoraron los aportes de la cibernética educativa en aras de comprender de manera sistemática los procesos de interacción social e interactividad que se llevan a cabo en este modelo educativo. Como resultados se encontró que la cibernética educativa hace posible el reconocimiento de los actores y contextos, dado que brinda claridad sobre la composición de los sistemas que se articulan a la hora de formar futuros profesionales. Asimismo, se considera fundamental reconocer a los actores como seres humanos de un contexto determinado, en el cual asumen retos para transformar el sistema económico y social con su labor.

Palabras clave

Educación a distancia, cibernética, actores, contexto, interacción social, TIC.

116



Introduction

The circulation and construction of knowledge in distance education systems demand changes in didactic and pedagogical designs, one of them focuses on the humanization of training processes, through the recognition of actors and contexts and the role they assume in social transformation. Each context presents its own particularities and requires critical professionals, human beings capable of innovating in their exercise and responding to specific and global problems. This is why recognizing the human being who is on the other side of the screen and the needs of the context to which it belongs is, without a doubt, the biggest challenge facing distance education, for its very mass-media characteristics. Seen this way, as Delgado (2011) puts it, technology-mediated education demands:

A permanent dialogue with the contexts where technologies are deployed. These contexts, always heterogeneous and social, involve a number of people and communities that are not part of the specialists, but without which the knowledge and practices that technology involves cannot be carried out in transformation actions (pp. 34-35).

In the technological era, the use of mass-media, social networks, and computer systems to carry out daily activities becomes indispensable. As Aguilar (2011) has stated, technology evolves and, in most cases, it does so to make people's lives easier. Wherever you look, there are advan-

ces and technological applications that serve to obtain information about what is happening in the world and how to operate in it. Education has assumed various challenges in order to favor training processes through cyber spaces. Among them, conceptual mobilizations in relation to what the classroom entails, the teaching and learning processes through virtual spaces, as well as the awareness of communicative processes since education is a social system that has as its base the use of language.

This paper aims to conceptualize the importance of the recognition of the actors and the context in the systems of distance higher education, in order to identify and analyze, through the contributions of educational cybernetics, the elements that articulate the training of professionals in the academy-business relationship to minimize the gaps between the educational offer and the labor demands. Recognizing the actors that interact on the other side of the virtual classrooms as human beings with their own needs, will also allow to humanize the processes of interaction through Information and Communication Technologies (ICT), improve the social interaction required in the construction of knowledge and identify the needs of its environment so that learning becomes useful when it comes to responding to the particularities of the context and thereby contributing to the sustainability of a territory.

For this purpose, in the first part, some of the phases and elements that have occurred in distance education will be briefly exposed; subsequently, the challenges imposed by the education of professionals in distance education systems in the XXI century are analyzed; in the third instance, the contributions of educational cybernetics in the recognition of actors and the context in distance education systems will be reviewed; the role of language in the processes of social interaction required for the interactive use of the mass-media will also be discussed. Finally, some final thoughts will be presented.

Some phases of distance education

ICT-mediated education got pedagogical and didactic designers in a conundrum in its initial stages. In this phase, there was resistance presented by the actors —teachers, and students— to take the step from face-to-face education to an education in which space and physical contact disappeared. Digital literacy began then, as Torres (2000) and Trujillo (et al., 2011) put it well, to overcome the difficulties and fears that arose from the few digital competencies of the actors involved in the process.



In addition to digital literacy, the genesis of distance education involved a conceptual and methodological mobilization for educators and students. Conceptual to the extent that the classroom, teaching and learning resources and processes gained new meanings and uses. Methodological since in order to mediate and achieve processes of interactivity and social interaction in cyberspace, teachers were required levels of didactic innovation to achieve in-depth learning. This introductory phase of distance education led to the implementation of a model in which the central axis of the process, as stated by Milojevic (et al., 2013), was man-machine-information interactivity. A mechanical interactivity in which there were really no processes of social interaction since the didactic designs were instructional¹ and the technological resources were not taken advantage of given the early stages of development.

118



Given the shortcomings of the ICT-mediated educational model, in its first phase, review and reform processes of distance education systems were initiated, in order to generate processes of what Klement and Dostál (2015), Rost (2006) and Kioussis (2002) called “social interactivity.” In which, technological mediations enabled, in addition to instruction, the exchange of information between the actors in the educational process.² For this phase, the figure “instructor” was changed to the figure “tutor”. The change implied greater closeness with the student, pedagogical and didactic designs in which there was feedback to improve the learning processes of the students. The tutor provided more support during the process. Processes that favor communication, interaction and interactivity, as Fainholc (1999) put it. However, in these systems, the objective was not the training based on the recognition of the other as a human being, but the specific education in which the mobilization of information was given through cyberspace.

The didactic designs in this phase of distance education had been reformed and allowed, through the use of technological resources, to account for the learning achieved by the student. At least this was evidenced by the thematic tests or evaluations programmed in the courses. The measurement of the competences was still incipient because the fact of giving an account of the concepts when answering the tests (questionnaires, forums and other activities) was not enough to demonstrate competence. This led didactic and pedagogical designers to think of new evaluation models for these systems.

A third phase in the design of distance education systems began decades ago. Educational cybernetics, based on the contributions of Stafford Beer (1974, 1982), led to the recognition that the nature of edu-

cational systems in cyberspaces lies in the human component. Given the complexity of its elements, educational cybernetics facilitates the analysis of information in the midst of complex systems, as García (2006) puts it. The role of human interaction is, then, recovered to interpret the complex systems and the information that compose it. Thus, the teacher's role made sense in the virtual and distance education system, and synchronous tutoring spaces appeared, in which the participation of the actors was valued. Pedagogical and didactic designs began to be thought to give primacy to the interaction between actors (teachers-students) and the role they play in the educational process.

In this phase, the man-machine-information-man turn began to favor social interaction through platforms and mass-media began to be better utilized. For its part, educational cybernetics allowed pedagogical and didactic designers to analyze and question distance education systems in order to plan educational improvement designs through science-technology-society-environment relationships (CTSA). In this phase, then, the circulation of information was mobilized towards the circulation of knowledge and the actors in the interactive process were intentionally linked.

Giving the actors greater strength over inanimate systems allowed teachers to reform course designs based on innovative processes that will lead their students to perform complex tasks using the acquired knowledge. This made it possible to start a process to overcome the instructional design that had been imposed for some decades.

However, in recent years it has been shown that technological models are constantly and rapidly evolving. The flow of information is increasing and the use of social networks has become a lifestyle for new generations, a way of approaching the world that ends up being unreliable. Therefore, it is urgent to think about new reform processes in which distance education assumes the challenges that science, technology, and society impose. Reason why, interactivity processes become insufficient to respond to the needs of the context, even if they are based on transactional models. Since, although they favor the recognition of the actors, they do not take into account the context to which they belong and their particularities. This, as stated by Zángara and Zans (2012):

The transactional distance model allows us to understand the phenomenon of mediated teaching as a communication space, in which the geographical or physical distance of teachers and students is not a fundamental element when planning and implementing a teaching proposal (p. 87).



But ignoring the distance falls into the error of ignoring the location of the other that interacts through the machine. The educational model is standardized to ignore geographical boundaries and with it, an educational program with the same characteristics is offered, for people who will work as professionals in diverse territories that demand answers to their particularities.

Now, thinking about a new model, as Lion and Maggio (2019) affirm, implies the contemplation of “contemporary scenarios that pose political, social, cultural, pedagogical, communicational and cognitive challenges” (p. 14). Thus, the training of professionals in distance education systems urges teachers to assume the obligation to innovate and challenge with the use of technologies to respond to the challenges brought by social needs, which “constitute a multidimensional and complex web in which a central feature has been the modification in the forms of production, circulation, and distribution of knowledge” (p. 14).

Higher education institutions are currently facing changing and dynamic environments that require faster and more adaptive responses to new scenarios. Therefore, it is essential to have strategic management tools that allow adapting quickly to the new demands of the context (Huerta and Pedraja, 2019, p. 5).

And distance education cannot ignore these contexts. Faced with this issue, the UN proposes distance education systems as set out in the ECLAC document, as a goal for the year 2030:

Ensure that all students acquire the theoretical and practical knowledge necessary to promote sustainable development, among other things, through education for sustainable development and the adoption of sustainable lifestyles, human rights, gender equality, promotion of a culture of peace, world citizenship and the valuation of cultural diversity and the contribution of culture to sustainable development, among other means (ECLAC, 2015, pp. 15-16).

A great challenge that involves thinking about formative processes in which the subject is recognized as an integral being, a being able to critically question reality in order to change it, to achieve the expected sustainability through the responsible exercise of his profession. For this, two elements become fundamental, among other things:

- *The recognition of the actors*, within the system, as human beings who interact socially in pursuit of the construction of knowledge.



- *Knowledge of the context in which they live*, as new professionals, must be able to solve the problems in their region to transform the environment and achieve sustainable development.

This challenge entails, as Torres (2000) puts it, a better use of ICTs within the context, as well as the suitability of the teacher so that, from the educational cybernetics, he brings his students closer to the recognition of their context and theoretical and practical knowledge that will allow him to develop as a competent professional and from his specialty, as Rosenblueth (2005) has proposed, to contribute to local and global transformations.

Challenges of vocational training for the XXI century

In recent years, higher education has tried to respond to the needs that arise in context. To this end, it has undertaken a series of actions in order to make strategic alliances within the university, business and state triad. Establish relationships through policies that effectively articulate education and work, as proposed by Colom and Vilanova (2009), and work together towards the horizon of the Sustainable Development Goals (SDGs). Thus, the new challenges assumed by higher education are linked to social, political and economic needs. It tends to operate in a relationship of education offered in universities, which operates from the recognition of labor demand in the regions, to train professionals who are able to achieve, from their work, sustainable development in the environment in which they inhabit, as proposed by the Sub-commission on Vocational Training of the Technical Commission, the National Council for Work Education, the International Labor Organization and the Ministry of Education, (2001).

The economic and social impact of the technological revolution, the new ways of organizing work, the globalization of economies, the integration of financial markets, goods and services and labor; the impact of negative consequences in countries that lag behind; with its unemployment consequences that generate alternative occupational initiatives; given the importance of “knowing” in overcoming such challenges and asymmetries... this reality raises the need for an area of integration between education and work where vocational training is one of its main components.

To achieve this task and link scientific and technical knowledge in the workplace, universities have carried out research processes in the areas and regions where professionals are trained in order to measure the



impact and reduce the gaps that have been generated between what new professionals offer and the real needs of the business environment.

In this sense, the recognition of the competencies that are required for the new professional to contribute significantly as a social actor in economic progress, and recognize from his profession the contribution expected of him in a society that operates under the principle of social justice, as well as in the growth of the region's economy, are the most important. University-business-State work tables, such as the one held in Manizales in June 2019 after discussing the contribution of the SDGs, become action strategies to minimize gaps between what business actors expect from new professionals. It is joint work in which the actors, the territory and the education system grow. It has been thought of a skills-oriented training in which future professionals are able to innovate and positively transform the environment impacting the territory with their knowledge. However, such reform has not been sufficient, since the gap between what is taught in educational institutions and what the company, and the society expects of the worker's performance continues and the information of the systems collected through the systems, articulated by educational cybernetics, show that the gap is greater in distance education. In massive programs, in which students do not have synchronous moments, the situation worsens.

It is clear that the growth of a nation-state depends on its educational processes. As Sánchez and López (2013) put it:

The main companies of society, both private and public, are conducted through to the performance of professionals, trained in Higher Education Institutions in the various fields of action and work in the complex social organization of States (p. 46).

Therefore, although educational policies have stipulated changes in their curricula, it is urgent to think more specifically about new ways in which professionals take on the challenges of the 21st century in an ethical and critical manner. Processes that mobilize in a real way, through the platforms the recognition of their actors and needs, and generate spaces in which the subject is collected as the construction of knowledge through social interaction. In the words of Montoya (2007), when presenting the progress of the Mission-Science, Education and Development Meeting of 1994, a large part of the current education system is characterized by fragmented, uncritical, outdated and inadequate education, which does not allow conceptual integration, which demotivates the curiosity of the students and develops inappropriate cognitive and behavioral structures.



For this reason, some teaching models have been reformulated, thinking about the relationships that are woven between the actors and the context. However, it must be said that this conception of training according to the needs of the business sector has been implemented in recent years in face-to-face education. Despite this, given the rapid change of the technological era, this transformation is not so evident in the field of distance education. In a large part of distance education systems, professionals are trained in scientific-technical content and knowledge through virtual platforms. Few designs monitor the training by competences and almost none recognize the particularities of the context of its students. Pedagogical designs do not respond to the needs of the environment. Precisely because of its mass-media nature, distance education has left aside the social actors that are part of a given context and offer a quantity of information and knowledge in the light of global requirements, given that its population belongs to the 'global village'.



Although distance education models have been evolving and have recognized, to some extent the role of actors in these systems, it is necessary to state that, to date, only the general needs of the business sector are taken into account and the particularities of the local are ignored. There, the gap —stated above— becomes wider, since distance education systems ignore the needs of each of the contexts to which their students belong. It is important to say that even when a vocational training program in a distance education system is offered for a given country; Within there are various regions and productive sectors with social needs tied to the environment of each region.

Distance education breaks geographical barriers, the borders of a territory. Thus, ignoring the particularities of the actors and the context does not respond to the challenges of each national and local instance. It is not the same to train business administrators for a city than to train them for the challenges of the rural context. It is not the same to train teachers who will work in violent areas and where they have suffered forced displacements, as is the case in Colombia, to train teachers for large cities whose social problems are different. It is not the same, to train for the challenges of those who are part of social networks and have turned them into a lifestyle than to think of training for those who remain illiterate in them. The skills required by one of the actors that make up distance education systems vary with their environment and with the problems they face. This is something that the university is obliged to identify and transform when proposing a distance vocational training system.

In this sense, the two great challenges faced by distance professional training in the 21st century are due to the recognition of the actors and their particularities, and the recognition of the context they will face in their working life. It is not a bet, as it is sometimes misunderstood, of education for work, based on training in general and specific skills from a contextless curriculum; but an exercise in which they are linked in a real and effective way university-actors-context-business-State.

Thus, given the proliferation of actors and contexts that interact in higher distance education, one must begin to think intentionally about changes in curricular, pedagogical and didactic designs, in order to articulate them to the curricula and the designs of classrooms and activities. All this to favor processes of innovation, interactivity and social interaction, which mobilize in students the development of skills and competencies to think about their reality in a critical way, and thereby contribute to minimizing accordingly the gap between educational supply and labor demand with the requirements of each region in which future professionals live.

124



Actors, contexts and educational cybernetics in vocational training

Among the many elements that make up a system of distance higher education³, this study bets, in the face of the new challenge, to rethink the role of the two previously stated: actors and contexts. In the various phases or models that have been generated throughout the educational processes mediated by ICTs, attention has been paid to resources, mass-media, interactivity, social interaction, and skills, among other elements. However, given the characteristics and the way in which this type of education⁴ has been carried out, it is perceived that these two components of the system are the crankshafts to achieve the objectives pursued and the goal that the UN sets for 2030.

The actors and contexts are the crankshafts that articulate the other elements of the system. Therefore, if one thinks about the role, they play in distance education systems, it will be possible to rethink educational processes in order to train new critical professionals: subjects capable of innovating in their environment and achieving sustainable development in their territories.

The recognition of the actors (teachers and students) as human beings who belong to a specific context will allow the generation of spaces for the social construction of knowledge and thereby impact the territory.

In this sense, recognizing the contributions of educational cybernetics, this is a commitment to the recognition of the other and its environment to contribute to the development of sustainable territories. Thus, to the extent that the actors in the process are recognized as human beings who are part of a context, it will be easier to think about competency education; in terms of Salazar (2016), a more humane education that adapts to the needs of the industry and that is capable of responding to the requirements of local and global territory.

This seeks to bring the training of individuals closer to the context where they are since it is from the economic and social functioning of the context that individuals seek a formation that places them in possession of knowledge with which they manage to have a better life. The selection of a certain profession depends, among other things, on the business requirements of the area in which future professionals will perform. In this way, the new deposits of employment arise, which from state policies are related to education through the need for training, making explicit what type of employee is required, and what skills are expected of new professionals to perform well.

However, it is important to highlight that distance education systems have in their favor the use of technologies, as well as the new tools of educational cybernetics. One cannot think of a real transformation without making good use of them. Technology becomes a tool to facilitate operations around context recognition; In addition to being the hub of interactivity and social interaction between the actors that are part of the system. Through ICT, distance education can be transformed and such changes, as Maturana and Varela (1973) put it, will lead to the strengthening of the capacities of the mind, body, and senses of the human body. As Gimeno (2008) puts it, ICTs allow virtual spaces within which, from a good pedagogical and didactic design, knowledge flows, which in turn provides for the student to have a better understanding of reality and thus improving his quality of life. The challenge, as stated by Hernández and Corona (2016), must be consciously and intentionally assumed by teachers to improve the educational practices in cyberspace and thus respond to the demands of the global technological world.

However, educational cybernetics can be very useful if it is thought of as a tool to understand how to operate these educational systems and their nature. The information generated in the interactive processes and the educational systems that have been designed, provide the teachers elements to start with their classroom and course designs, in order to favor the students according to their environmental needs. It is not a question



of making a design for each student or each context, but of identifying the particularities of the culture, the economy and the social development in which the students live and thus thinking about a real configuration of the educational system, in which spaces for dialogue and discussion are favored, which allow the student to be placed in his professional role and that brings them closer to the possible problems he will face in his context when exercising as a professional.

From this perspective, educational cybernetics becomes an axis to mobilize this change not only because it allows the recognition of the human component that creates and interacts in the educational system, but because it allows us to understand that symbiosis that occurs between the biological, the social, and the cultural, framed in a specific context and time. The recognition of human complexity, of the complexity of educational systems and, in turn, of regional economic systems, allows those who design distance education systems to have a foundation on which to operate. In this sense, educational cybernetics, in addition to enabling a different conception of 'system', which escapes the traditional, allows to have the details of how they work, to articulate them and better understand the educational phenomenon and the problems that arise in the training of professionals in distance education systems.

It is undeniable that society is immersed in a world of systems, the real problem is knowing their functioning and the articulation that is generated between them. A tree, a book, a park, some computer, a vehicle, a social communication, languages, data, and information are systems, among many others, are all systems. We live in a universe composed of systems and they all relate to each other.

The recognition of these systems and their operation allows improving the processes of interaction and social interactivity in distance education systems.. Therefore, educational cybernetics constitute a crankshaft when it comes to understanding how distance education systems, educator systems, actors and contexts (which are also systems) operate, as they also share its characteristic: they are complex entities, formed by parties in mutual interaction, whose identity results from an adequate harmony between its constituents. In the words of Aracil (1986), systems are endowed with their own substantivity and the actors who interact in them must understand the functioning of their nature.

Seen this way, being in a world immersed in systems is necessary for subjects to develop the ability to distinguish them in order to interact with them, as Beer (1982) puts it, especially if within these complex systems one is teaching in a distance education system. Given that by re-



cognizing its nature and functioning, the teacher will be able to identify, as Beer (1982) has determined, that “as well as it is possible to expand a system to cover a greater perspective, it is also possible to simplify the system reducing it to a smaller version” (p.25)⁵ From educational cybernetics, the teacher will be able to see in the system, of which he/she is part, all its dimensions in order to not fall into the reductionism that has occurred until now.

Thus, educational cybernetics allows the teacher to understand that the education provided to the professional, being a system, must be treated on its foundation as such. It must be studied in its parts and in its entirety and must be understood in its relations with other systems, in this case, labor.

From this approach, it is suggested, following the ideas of Foerster (1991), that educational cybernetics will make it possible to recognize actors and contexts, to the extent that it provides us, through the appropriate use of ICT, clarity about the composition of the systems that are articulated when it comes to training future professionals. Thus, starting with the observation of the behavior of the real systems that interact in a system of distance higher education, including the labor system and its deficiencies, will allow to go beyond the current design and rethink the competencies that each professional requires, both general and specific, tied to the need of context. This implies having an understanding of the particularities that interact in a real system.

In accordance with the above, Fainholc argues (2004):

A quality program not only sends information (of high quality) but also cares about providing a personal experience with each student and with each tutor/teacher. That is, it is to move from the stage of external information to consider explicit personal knowledge. This involves carefully planned and monitored processes of social interaction and technological-educational interactivity (p. 4).

It is, then, to think about new designs that favor the link between the educational system mediated by technologies, the labor system, the social system in which the creators are immersed and the knowledge system that emerges in this interrelation.

Also, by linking educational cybernetics, a design can be planned from the identification of the fundamental components and processes that will be carried out in the training of future professionals, anchored to the systems that are articulated for this purpose. The above demands, in terms of Foerster (1991), the identification of the feedback structures



that allow explaining its behavior, that is, a permanent analysis of the system and its nature in order to improve the teaching and learning processes thinking about articulating: education-employment.

It could be said that the recognition of the nature of these systems and the interaction between them will lead to the identification of the elements that allow improving the processes of distance education in terms of professional training. Since these in their nature end up being, as Beer (1982) puts it, “probabilistic systems”. Excessively complex systems, since they involve the biological, the social, and the cultural, as well as being framed in political, economic and historical contexts. Therefore, the interactions that comprise it and the results obtained in the interaction of these two systems (education and business) are ever-changing from their elements to their impacts on the environment. A complexity that also links human intentionality (which by its very nature also becomes complex).

The panoramic optics provided by educational cybernetics allow us to identify the limits of interaction between one system and another, not only to establish points of convergence but to identify the points of divergence between the systems that interact. This is how having the information and the analysis of the interaction between the operating systems can make designs that tend to reduce the gap between what the professional can provide in their exercise and what the environment demands in order to achieve sustainable development. What Foerster (1991) has called the benefits of cybernetics when contemplating the organizational structures of each system and the processes of interaction between one system and another: interactions that are generated given the similar nature of both structures. In this case, it could be inferred that what underlies the structure of both is the social system component.

However, the analysis of the scope of educational cybernetics leads to other questions in order to respond to the problem, including: What elements become essential and common to the education system, the distance education system and the business system? What is the element that makes possible the interaction links between the stated systems? How to achieve effective transformations in vocational training to reduce the gap between educational supply and labor demand? Questions that allow the discussion to land on a common element that underlies the entire nature of social reality and, therefore, of the social system: language (Searle, 1969, 1995).



Language in distance education systems

Educational systems and labor systems are part, among many others, of social systems. Its link, as educational cybernetics has shown us, is woven from the accumulation of information that circulates. Information, in turn, encoded and built by symbolic games.

Distance education systems require the use of various language games, as Wittgenstein (2009) said so that students articulate themselves as actors in the social construction of knowledge and reach an impact by transforming, from their professional practice, the environment. Language allows, in distance education systems, to move from interactivity to social interaction, as stated by Rodríguez and Sosa (2018). In this sense, through language one of the objectives of educational cybernetics is achieved: humanize the education system. In terms of Wiener (1984):

When I contact another person, I give him a message; when he responds, he gives me something in relation to what I said and that contains reports accessible to him primarily and not to me. When I regulate the actions of another person, I communicate a message; although it is in the imperative mode, the communication technique does not differ from that of the statement of facts. In addition, if my regulation is to be effective, I must be aware of any message from him that indicates that I have understood and obeyed the order (p. 86).

Cybernetics becomes, therefore, essentially, in the science of information and communication, which seeks to obtain information from the world and process such data to seek some control of the phenomena that occur, mainly through the use of the machines, always operating feedback loop of the information in the whole process.

Thus, the analysis that enables educational cybernetics facilitates the understanding of the process of interaction with others in ICT-mediated education, building new knowledge from information and transforming social reality with that knowledge. Seen this way, language is imposed as the regulatory axis of the process of social interaction. Similarly occurs with education, since it is a process in which communication is the basis of all training activity. The reason why, in the pedagogical designs, it is urgently necessary to consciously involve the actors within the system so that from their communication processes they propose new alternatives for a real change that impacts the territory with sustainable development.

In this perspective, the language games proposed by Wittgenstein (2009) and their intentional use, as Searle (1969) puts it, make communi-



cation processes loaded with meaning possible. Which demands, in turn, that the pedagogical and didactic design of distance education systems must be mostly thought of from the intentional use of language in order to overcome instruction, to critically address the flow of information and carry out real feedback processes that favor the social construction of a knowledge that will impact the context.

Thus, the feedback in the professional training process should not only be based on scientific knowledge but according to the needs of the context and the particularities of the region in which the students will carry out their work. Therefore, language is the element that allows for effective communication that accounts for these peculiarities, as well as the development and strengthening of the skills necessary to respond to specific problems in the workplace.

It is undeniable, then, the role played by ICT and cybernetics and, in their nature, the use of language. The commitment that teachers must assume is semantic and pragmatic with language when thinking about designs that favor dialogue and discussion spaces to intentionally mobilize the social construction of knowledge. The use of language allows humanizing the processes within the educational systems, in addition, as Sosa and Rodríguez (2018) have stated, it makes it possible to take the instructional step to achieve the real construction of knowledge and, of course, enabling social interaction that favors the formation of the competent, ethical and, above all, critical professional future.

The correct use of language makes possible the real transformation of the environment from the economic and social field, as expected of the new professionals. The processes of effective communication between direct actors (teachers and students) and indirect actors (entrepreneurs) within distance education systems must reflect joint work; in such a way that the training professional identifies from his formative process the characteristics of the territory and the labor needs within it, and thus with the knowledge acquired together, generate new opportunities to transform his context. Seen this way, the actors are, then, the only ones who can transform social reality and do so to the extent that they engage and jointly build the educational process. A construction that implies the use of language.

According to the above, if the actors are those who mobilize the operation of distance higher education systems —since they are human beings who find the need to train, be competent, and must take on the challenges to transform the economic and social system with their professional work— they must have as a priority a reflexive formation that



generates spaces to discuss local problems and plan with their teachers actions that lead to change. This demands processes of accompaniment by the teacher-tutors, in order to know the conditions in the context in which their students are immersed, and with it to mark discussions and actions so that the new professionals impact their territories.

Conclusions

The advanced changes in the technological era and their increased flow of information are a challenge for distance higher education systems. Training professionals to solve the social and economic problems of the context in which they will operate has not been the priority of distance education systems, which, given their mass-media nature, end up ignoring the actors and their contexts.

This brings an urgent call to the teachers and universities that create and design the programs of these education systems, in order to raise awareness of the challenges faced by the professional training of the 21st century and the gap that is evident between what is expected in the business and educational sectors that point towards more global directions.

This challenge makes it possible to identify that one of the great failures in this process, which sharpens the gap between labor supply and demand in vocational training, is the lack of knowledge of the actors and contexts. Said ignorance, as well as giving priority to the circulation of information in instructional designs—among other factors— has led to thinking about models in which information is privileged over knowledge, instruction over reflection and discussion, and the global village above the particularities of the local environment. Giving way to in mass formation, without context and without the human component.

Faced with this problem, educational cybernetics appears as an option for change and for those who design distance education systems to take on the challenge of forming human beings. Recognize them and lift them to their role in social change. Something that is possible to the extent that the educational model of these systems is directed towards the spaces of discussion and dialogue, spaces that allow the recognition of all the subjects that belong to a context and who from their professional practice are in the moral and political obligation to critically change the environment. All this in order to achieve sustainable development.



Notes

- 1 In the instructional model, the teacher or educator adopted the figure of “instructor.” He was in charge of the content and his expertise for pedagogical design and guided the processes in the virtual classrooms through instructions. This process evidenced great shortcomings in the accompaniment and discussion because they should have favored student-machine-information interactivity.
- 2 For this phase, the figure “instructor” was changed to the figure “tutor”. The change implied greater closeness with the student, pedagogical and didactic designs in which there was feedback to improve the learning processes of the students. The tutor performed more support during the process.
- 3 Understand as systems those complex entities, formed by parties in mutual interaction, whose identity results from an adequate harmony between its constituents, and endowed with its own substantivity that transcends that of those parties (Aracil, 1986).
- 4 Distance education systems are designed for big groups of students. They also operate in cyberspace that, for the most part, is either unknown or ignores the territory in which the actors are located. In this sense, when professional training programs are created, pedagogical and didactic designs become unaware of the subjects and their environment. The massiveness and heterogeneity of the groups of students that are part of these systems has led teachers to neglect or put in the background the recognition of the other (their students) as a social and historical being that belongs to a specific context, in who in turn there are certain particularities and needs to respond to their professional practice.
- 5 The reduction to which reference is made consists of what is happening today, that is, the ignorance of the parties and their particularities. The whole has been seen in the formative process, but not the parties, not the actors and the contexts that constitute the system and its rationale.

132



Bibliography

AGUILAR, Floralba

- 2011 Reflexiones filosóficas sobre la tecnología y sus nuevos escenarios. *Sophia, Colección de Filosofía de la Educación*, 11, 123-174.

ARACIL, Javier

- 1986 *Máquinas, sistemas y modelos*. Madrid: Tecnos.

BEER, Stafford

- 1974 *Diseñando la libertad*. México DF: FCE.

- 1982 *Decisión y control: el significado de la investigación de operaciones y la administración cibernética*. México: FCE.

COLOM, Antonio & VILANOVA, Catalina

- 2009 El sistema educativo como yacimiento de empleo. *Revista Interuniversitaria*, 14. Doi: 10.14201/ted.2986

DELGADO, Carlos

- 2011 Tecnología, meta-tecnología y educación: reflexiones filosóficas sobre la tecnología y sus nuevos escenarios. *Sophia, Colección de Filosofía de la Educación*, 11, 31-55.

- FAINHOLC, Beatriz
 1999 *La interactividad en la educación a distancia*. Buenos Aires: Paidós.
 2004 La calidad en la educación a distancia continúa siendo un tema muy complejo. *RED: Revista de Educación a Distancia*, 3(12).
- FOERSTER, Heinz von
 1991 *Las semillas de la cibernética*. Barcelona: Gedisa.
- GARCÍA, Rolando
 2006 *Sistemas complejos: conceptos, método y fundamentación*. Barcelona: Gedisa.
- GIMENO, José
 2008 Tecnología y educación: ¿qué hay de nuevo? En *Enciclopedia Iberoamericana de Filosofía* (vol. 29, pp. 129-156). Madrid: Trotta.
- HERNÁNDEZ, Eduardo & CORONA, María
 2016 La universidad: Reflexiones sobre el quehacer docente y el contexto global. En Red Durango de Investigadores Educativos (eds.), *Actores y procesos educativos: estudios que parten del terreno formativo* (pp. 1-10). México DF: Red Durango de Investigadores Educativos.
- KIOUSIS, Spiro
 2002 Interactivity: a concept explication. *New Media & Society*, 3(4), 355-383. doi: 10.1177%2F146144480200400303
- KLEMENT, Milan, CHRÁSKA, Miroslav, DOSTÁL, Jiří & MAREŠOVÁ, Hana
 2015 Multimediality and interactivity: Traditional and contemporary perception. *Turkish Online Journal of Educational Technology*, 11, 414-422.
- LION, Carina & MAGGIO, Mariana
 2019 Desafíos para la enseñanza universitaria en los escenarios digitales contemporáneos: aportes desde la investigación. *Cuadernos de Investigación Educativa*, 10(1), 13-25. Doi: <https://doi.org/10.18861/cied.2019.10.1.2878>
- MATURANA, Humberto & VARELA, Francisco
 1973 *De máquinas y seres vivos. Autopoiesis: la organización de lo vivo*. Santiago de Chile: Editorial Universitaria.
- MILOJEVIC, Ana; KLEUT, Jelena. & NINKOVIC, Danka
 2013 Methodological approaches to study interactivity in communication journals. *Comunicar*, 21(41), 93-102. Doi:10.3916/C41-2013-09
- MINISTERIO DE EDUCACIÓN
 2001 *Formación Profesional. Materiales de trabajo para la formulación de un Acuerdo Marco*. México: INET.
- MONTOYA, Javier
 2004 Primer avance de investigación: acercamiento al desarrollo del pensamiento crítico, un reto para la educación actual. *Revista Virtual Universidad Católica del Norte*, (21), 1-17. Recuperado de <https://bit.ly/2t50Nbc/>
- RODRÍGUEZ, Angélica & SOSA, Ernesto
 2018 Interactividad e interacción social: procesos esenciales en educación a distancia. *Revista Virtual Universidad Católica del Norte*, (55), 110-127.
- ROSENBLUETH, Arturo
 2005 La estética de la ciencia. En Autor, *Obra filosófica* (tomo 8, pp. 63-72). México DF: Colegio Nacional.
- ROST, Alejandro
 2006 *La interactividad en el periódico digital* (tesis de doctorado, Universidad de Barcelona, España). Recuperado de <https://bit.ly/2Zu5irM/>



- SALAZAR, Laura, MILÁN, María & MENDIVIL, Grissel
- 2016 La formación docente plan 2012: una mirada a las competencias profesionales. En Red Durango de Investigadores Educativos (eds.), *Actores y procesos educativos: estudios que parten del terreno formativo* (pp. 88-97). México DF: Red Durango de Investigadores Educativos.
- SEARLE, John
- 1969 *Speech Acts. An essay in the philosophy of language*. Cambridge University Press.
- 1995 *The Construction of Social Reality*. Nueva York: The Free Press.
- STAFFORD BEER, Anthony
- 1974 *Ciencia de la dirección: la investigación operativa en la empresa*. Buenos Aires: Ateneo.
- TORRES, Rosa
- 2000 *La profesión docente en la era de la informática y la lucha contra la pobreza*. Seminario sobre Prospectivas de la Educación en la Región de América Latina y el Caribe. Oficina Regional de Educación de la UNESCO. Recuperado de <https://bit.ly/2tSrQV/>
- TRUJILLO, Juan, LÓPEZ, Juan & PÉREZ, Eufrasio
- 2011 Caracterización de la alfabetización digital desde la perspectiva del profesorado: la competencia docente digital. *Revista Iberoamericana de Educación*, (55), 1-16. Recuperado de <https://bit.ly/2Sz0D6r/>
- WIENER, Norbert
- 1948 *Cybernetics or Control and Communication in the Animal and the Machine*. Nueva York: Hermann.
- WITTGENSTEIN, Ludwig
- 2009 Investigaciones filosóficas. En I. Reguera (ed.), *Obra completa: Tractatus logico-philosophicus. Investigaciones filosóficas. Sobre la certeza*. Madrid: Gre-dos.
- ZÁNGARA, Alejandra & ZANS, Cecilia
- 2012 *Aproximaciones al concepto de interactividad educativa*. I Jornadas de Difusión y Capacitación de Aplicaciones y Usabilidad de la Televisión Digital Interactiva Red-AUTI. Red de Aplicaciones y Usabilidad de la TVDi y CYTED.

Document receipt date: July 15, 2019

Document revision date: September 20, 2019

Document approval date: November 15, 2019

Document publication date: January 15, 2020



MOBILE-LEARNING MEDIATED WITH PACIE

METHODOLOGY FOR CONSTRUCTIVIST KNOWLEDGE

El mobile learning mediado con metodología PACIE para saberes constructivistas

JUAN CARLOS COBOS VELASCO*

Universidad de Central del Ecuador, Quito

ccobos@uce.edu.ec

Orcid Code: <http://orcid.org/0000-0002-9770-3727>

VERÓNICA PATRICIA SIMBAÑA GALLARDO**

Universidad de Central del Ecuador, Quito

vpsimbanag@uce.edu.ec

Orcid Code: <https://orcid.org/0000-0002-7466-7364>

LILIAN MERCEDES JARAMILLO NARANJO***

Universidad de Central del Ecuador, Quito

lilian.jaramillo.naranjo@gmail.com

Orcid Code: <http://orcid.org/0000-0002-0586-4292>

Suggested form of citing: Cobos, Juan, Simbaña, Verónica & Jaramillo, Lilian (2020). Mobile-Learning mediated with PACIE methodology for constructivist knowledge. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 135-156.

* PhD in Educational Research. Master in Educational Computer Systems. Vice Dean of the Faculty of Philosophy Arts and Education Sciences of the Central University of Ecuador.

** Master in Hispanic American and Ecuadorian Literature, and in Higher Education and Gender Equality. Specialist in Design and Management of Educational and Social Projects with a Gender Approach. Professor at the Faculty of Philosophy, Letters and Education Sciences of the Central University of Ecuador.

*** Master in Education and Social Development, and in Technologies for Teaching Management and Practice. Bachelor of Science in Education. High School Teacher in the Specialization of Biology and Chemistry. Professor of the Pedagogy of Experimental Sciences in Informatics at the Faculty of Philosophy of the Central University of Ecuador.

Abstract

In this article entitled Mobile-learning mediated with PACIE methodology (Presence, Reach, Training, Interaction, E-learning) for constructivist knowledge, the objective is to analyze how mobile devices contribute significantly to learning processes, benefit students and teachers to interact immediately in the construction of knowledge. In the proposed scenario, reflections of several modern researchers that support m-learning are considered, points of view that allow the analysis of conceptions to relate the processes of the PACIE methodology. This analysis will allow considering the use of mobile devices for e-learning. Indeed, it is looking at the gap between traditional education and mobile devices, the latter arouses interest in the mediation of learning between teachers and students. It also stimulates the sense of autonomous responsibility, supports and strengthens curricular and extracurricular teaching-learning practices from several innovative scenarios. The results show how learning is strengthened when interacting with the use of mobile devices, as it allows you to be connected anywhere and at all times. The main contribution of an article is the presentation of some innovation alternatives to improve the teaching-learning process based on the PACIE methodology. In addition, it will reflect on the teacher's vision regarding the use of technology.

Keywords

PACIE methodology, constructivist knowledge, m-learning, teaching-learning.

Resumen

El presente artículo titula el *mobile learning* mediado con metodología PACIE (presencia, alcance, capacitación, interacción, *e-learning*) para saberes constructivistas. El objetivo es analizar cómo los dispositivos móviles aportan en forma significativa en los procesos de aprendizaje, benefician a estudiantes y docentes a interactuar de manera inmediata en la construcción del conocimiento. En el escenario planteado se considera reflexiones de varios investigadores modernos que respaldan el *m-learning*, puntos de vista que permiten el análisis de concepciones para relacionar los procesos de la metodología PACIE. Este análisis permitirá considerar el uso de los dispositivos móviles para el *e-learning*. Lo que se quiere es mirar la brecha entre la enseñanza tradicional y los dispositivos móviles, este último despierta el interés en la mediación de aprendizajes entre docentes y estudiantes. Además, estimula el sentido de responsabilidad autónoma, y apoya y fortalece prácticas de enseñanza-aprendizaje curricular y extracurricular desde varios escenarios innovadores. En los resultados se evidencia cómo el aprendizaje se ve fortalecido cuando interactúa con el uso de los dispositivos móviles, pues permite estar conectado en cualquier lugar y en todo momento. El principal aporte de artículo es la presentación de algunas alternativas de innovación para mejorar el proceso enseñanza-aprendizaje con base en la metodología PACIE. Además, reflexionará sobre la visión del docente con respecto al uso de la tecnología.

Palabras clave

Metodología, PACIE, constructivismo, enseñanza, *m-learning*, aprendizaje.

Introduction

This article analyzes the significant contribution of the use of mobile devices for e-learning, that is, the transformation of traditional education into innovative learning for the digital age. A situation that will strengthen the networks of thought and learning communities in a perspective for the new virtual educational practice, so it is important to highlight that it becomes essential and necessary to align ourselves with new virtual



methodologies for modern pedagogical scenarios. In this case, there is m-learning that becomes the model of interconnectivity with the internet. In this reality, it is relevant to highlight that “the age of the internet demands changes in the educational world [...] this change is moving towards a new, more personalized educational connectivist paradigm focused on the virtual activity of students” (Marqués, 2012, p. 10). This new horizon immediately enhances online knowledge, whose well-used devices promote synchronous and asynchronous learning in technological pedagogical scenarios.

The objective of this article is to analyze m-learning mediated with PACIE methodology for constructivist knowledge, this will allow assessing modern educational trends in order to apply them in technological didactic scenarios through the use of smart mobile devices such as laptops, portable audio devices, iPods, smartwatches, gaming platforms, among others, whose purpose is to mediate the teaching and learning processes with the PACIE methodology. This methodology is considered the modern virtual constructivist pedagogical strategy for knowledge. With the presence of the object of learning, scope, training, interaction, and e-learning, the construction of knowledge in educational research and innovation contexts is strengthened.

Innovating in the construction of autonomous and collaborative learning is the main contribution of this article since it values the use of mobile devices for teaching. It is common to listen to teachers who say: ‘Do not bring cell phones to class’, from this idea our hypothesis is posed: Is the intervention of the internet through the mobile device, accompanied by the PACIE methodology important to strengthen constructivist learning?

Boosting constructivist learning from modern pedagogical settings will facilitate teachers and students rescuing previous knowledge, now called ‘inverted classroom’. This innovation consists of sending the link either from a video or perhaps from the document that you want the students to review, this process will allow requesting summaries to develop the new knowledge. What is intended is to promote autonomous and collaborative learning through several mobile devices.

The methodological framework we used is bibliographic research, through authors and organizations that support theories about the use of mobile devices such as: Chamocho (2016) that bases the origin of m-learning and its implementation in education; Santiago, Trbaldo and Kamijo (2015) who support the classification of mobile devices into three



broad categories; the National Institute of Statistics and Censuses (INEC, 2016) that presents information on the increase in the use of mobile devices in Ecuador; Ausín, Abella, Delgado, and Hortigüela (2016) confirm the use of mobile devices in learning; Camacho (2008) and its PACIE methodology for virtual learning environments; Mejía, Sánchez, and Vizcaino (2014) who indicate that learning is based on the experience's relationship; González (2016) and the dialectical or social constructivism; finally, the Technological Observatory of the Ministry of Education, Culture and Sports of the Government of Spain (2011) that mentions experiences of the use of m-learning and various educational applications for mobile devices. Based on the considerations above, relevant aspects of *mobile learning* are highlighted.

The investigation begins with the generalities of m-learning, classification of mobile devices, the use of mobile devices in Ecuador and the world, and mobile devices used in Ecuador with data from INEC. The study continues with the analysis of pedagogical advantages in educational processes through mobile devices in e-learning and the experiences of other countries with the application of the PACIE methodology. The article concludes with the presentation of some pedagogical innovation alternatives to be applied in virtual educational scenarios, one of them is the PACIE methodology. In addition, we reflect on the teachers' vision regarding the use of technology.

Theoretical approach

Mobile learning or learning based on the use of mobile applications is considered one of the modern computing technologies that will have a great impact on educational innovation, which will allow transforming traditional education into modern. The mobile learning concept generates great expectations in the educational field, as it offers innovative methods to favor the construction of knowledge through the use of mobile devices such as smartphones, laptops, tablets, personal digital assistants (PDAs) and any other device that can be wirelessly connected. As indicated by Francisco Chamocho (2016):

The origin of m-learning and its implementation in education are closely linked to the evolution and convergence of three aspects that are: the development of mobile technologies, the new educational paradigm and the emergence of new forms of learning (pp. 13- 14).



The development of mobile technologies has allowed the evolution of ubiquitous communication so that people can access content and resources at any time, regardless of where they are. In reference to this new paradigm, there is a change in attitude in schools, colleges, and universities in which they consider the use of mobile devices as a technological resource with infinite possibilities for learning.

The emergence of new forms of modern learning has managed to meet the demands of technological education since it is easily learned through the internet without the limitations of time and place. Therefore, the use of mobile applications is considered as a modern learning innovation.

Some concepts related to m-learning

139



M-learning is a teaching-learning methodology that uses all types of mobile devices with a wireless connection to allow access to knowledge from anywhere and at any time. UNESCO (2013) notes that:

Mobile learning involves the use of mobile technology, either alone or in combination with other information and communication technology (ICT), to enable learning anytime and anywhere. Learning can unfold in a variety of ways: people can use mobile devices to access educational resources, connect with others, and create content, both inside and outside classrooms. Mobile learning also encompasses efforts to support broad educational goals such as effective administration of school systems through the use of mobile devices (p. 6).

These perspectives of mobile contexts allow us to overcome geographical, economic, labor and personal obstacles, thus contributing to equal opportunities, since it allows people to connect with everyone, no matter how far away they are. It is an alternative to face the current situation and project the scope of motivational learning. In addition, it encourages teachers to plan, design, produce materials and various forms of tutoring. It represents the most important way of didactic dialogue or mediated communication because by its self-instructional nature it allows autonomous learning. In this regard, Salgado (et al., 2016) highlights the following:

Mobile learning is a set of teaching and learning practices and methodologies using mobile technology, that is, using mobile devices with wire-

less connectivity. It would be the combination of e-learning or learning through the internet, with mobile devices to produce educational experiences in any situation, place and time, moving the educational processes to a new dimension by being able to cover urgent learning needs, anywhere and with great interactivity (p. 4).

For Pacheco and Robles (2006), they affirm that “m-learning corresponds to the sum of learning plus mobile devices and more wireless network” (p. 6). Similarly, the Spanish Ministry of Education (2012) states that:

This educational methodology allows both the teacher and the student to maintain constant contact at any time of the day, thereby promoting an individualized education and adapting to the needs of the student at all times (all people are not motivated at the same times of the day) and so with a long etcetera of advantages (p. 1).

140



Therefore, it can be noted that mobile learning positively influences student interest, which means that many aspects of the teaching-learning process can be developed efficiently, with these modern virtual scenarios. In the same way it allows the student to build knowledge, skills and digital skills at any time and in any place.

Mobile devices

It is a portable instrument that has processing capabilities, storage and internet connectivity that is used for certain tasks. In general, Santiago emphasizes that mobile devices are classified into three broad categories: the first limited data mobile devices specified by having small text-type screens and data services limited to SMS and WAP access; the second basic mobile data device is characterized by medium-sized screens whose navigation is based on icons and allows access to email, SMS, web browser, etc.; the third kind is an improved mobile data device that has medium or large touch screens, has applications such as Microsoft Office, corporate applications, internet portals and operating systems (Santiago et al., 2015, pp. 14-15).

The operating systems used for mobile devices are many, but there are two that are the main ones and that occupy almost the entire market: iOS and Android, followed, but by far by Symbian, BlackBerry OS, and Windows Phone. The main feature of mobile devices is the mobility they

offer since they are small devices that can be carried in your pocket and are also easy to use.

These devices also allow you to connect them to a computer to be able to interact with the processing, storage, and connectivity. Another feature to note is that these devices allow connection to a wireless network.





Types of mobile devices

Currently, there is a wide variety of mobile devices that can be carried from one place to another and that are easy to operate. Now, from the analysis of the work of Santiago (et al., 2015), the following types of mobile devices are determined:

- *Smartphones*: It is a type of mobile phone that has the ability to process and store information similar to a minicomputer. Smartphones allow mobile connectivity and application execution for countless activities such as the use of email.
- *Portable game console*: it is lightweight electronic; it can be used for video games. In this portable device the screen, controls, audio, and battery are integrated which allows the user to be connected at any time and from anywhere.
- *Personal digital assistant (PDA)*: personal pocket digital assistant.
- *Pager*: It is a telecommunications device that receives short messages.
- *Laptop*: It is a small type of computer designed to be moved from one place to another and that allows processing and storage similar to that of a desktop computer. Laptops, unlike notebooks, allow more advanced processing and storage.
- *Ultra-Mobile PC*: It is similar to a small format tablet, they have good processing capacity for text, audio, video, communication, and network editing.
- *Tablets*: It is a device larger than a smartphone or a PDA. This device has a touch-screen that allows interaction without the need for a physical keyboard or mouse, they also have more advanced features for both processing and storage (pp. 21-31).



Figure 1
Types of mobile devices

Smart phones	
PDA	
Pager	
Portable game console	
Tablets	
Laptop	
Ultra-Mobil PC	

Source: the authors

The use of mobile devices in Ecuador and the world

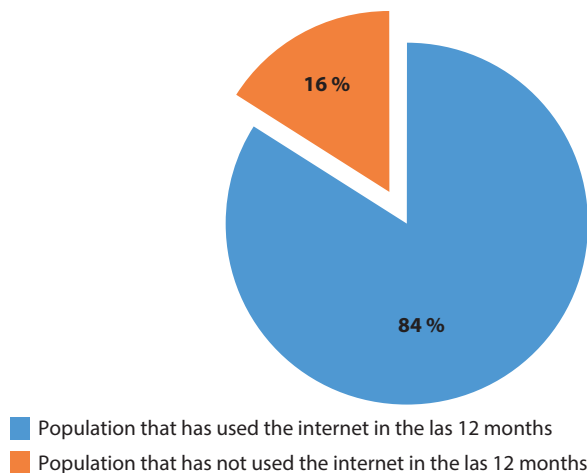
The use of mobile devices has been growing vertiginously worldwide, and Latin America could not lag behind this technological revolution that covers the entire world, according to Viracocha (2017):

There are more than 630 million mobile connections, which place Latin America in the third-largest mobile phone market worldwide. Among

the mobile devices that register greater connections to the network are smartphones, tablets and laptops, and specifically smartphones because new models of equipment offer higher performance and allow to meet the increasingly demanding needs of users (pp. 41-42).

In the National Multipurpose Household Survey of INEC (2018), the use of mobile devices in Ecuador has increased rapidly, so that by the year 2018, the acquisition of laptops in homes has increased 10.3 points and in five years has reached 24.2%” (p. 5). INEC issues another interesting figure for Ecuador: in 2018 55.9% of the Ecuadorian population evidenced that they use the internet in the last year. In the urban sector, there is greater internet usage than in rural areas (p. 12).

Figure 2
Percentage of people who have used the internet in the last 12 months



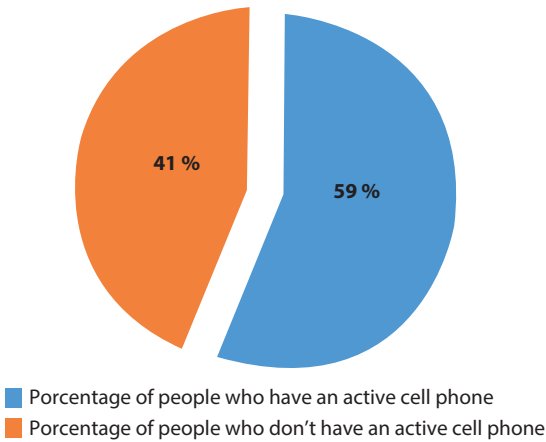
Source: the authors from INEC, 2018, p. 17

According to the National Multipurpose Household Survey of the INEC (2018), the data regarding cellular telephony indicate that: 90.1% of Ecuadorian households own cellular telephony, of which 59% have at least one activated cell phone. Another important fact is that the age group with the highest use of activated cell phones is the population that is between the ages of 25 and 34 followed by the population that is between 35 and 44 years (p. 21).

Figure 3 indicates the percentage of people who have an activated cell phone:



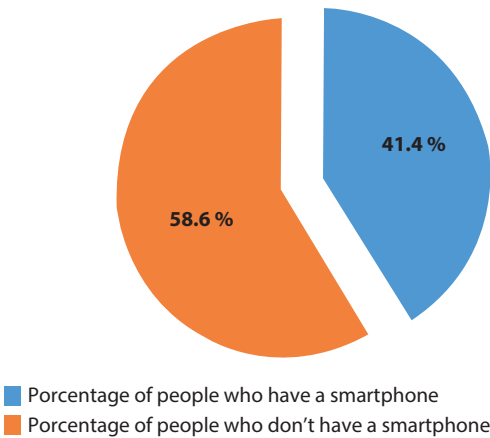
Figure 3
Percentage of people who have an active cell phone



Source: the authors from INEC, 2018, p. 19

According to data from the same survey (INEC, 2018), the segment of the smartphone “grew 4.2 points compared to 2012, that is, it rose to 41.4% of the population having a smartphone” (p. 23).

Figure 4
Percentage of people who have a smartphone



Source: the authors from INEC, 2018, p. 23

Based on the previous data on the use of mobile devices and specifically smartphones, Ecuador has had accelerated growth in accordance

with what happens in the rest of the planet, since it is a global trend. The use of mobile devices allows you to better perform daily activities and learning can also become a daily activity.

Trends in the use of portable devices in learning

ICT has allowed us to witness an important transformation in the educational field, however, the desired levels have not been achieved, since in some cases the traditional teaching-learning models have simply been moved to current technologies. Thus, according to Ausín (et al., 2016):

Adequate use of ICT should be established and the teacher encouraged to create their own teaching resources, based on the characteristics and needs of the student, and fundamentally with an appropriate instructional design to generate self-learning and achieve learning milestones (p. 31).

In response to these trends, Jaramillo and Simbaña (2014) indicate that “the use of ICT in education reduces the obstacles that arise in the pedagogical process” (p. 302), that is, it leads teachers to design teaching resources to ensure that programmatic content is motivating, in accordance with the new digital era. Therefore, “the use of ICT in education provides a number of tools, resources, media and formats that enable teaching strategies to facilitate the construction of knowledge” (Basantes et al., 2017, pp. 3-4). However, success depends on achieving the integration of technology in all educational settings so that the pedagogical classroom becomes a collaborative learning environment. Similarly, Ramírez (2009) mentions that:

When incorporating technological resources in learning environments, the advantages of providing greater flexibility for access to educational content [...] are evident, so the use of technological resources in the classroom is an important contribution in the process of teaching-learning that leads to increased student motivation (p. 71).

Then, the increase in the use of mobile devices has become a significant asset in recent years and should be used to a great extent to strengthen contemporary learning, as it will respond to the educational demand of the current times. Thus, Shuler (et al., 2013) indicates that:

As the power, functionality, and affordability of these devices increase, their ability to support learning in new ways also increases, therefore mobile learning provides advantages such as the flexibility of access to information at any time and place, favors autonomous learning and teamwork,



promotes the creation of learning communities and encourages effective active communication in a synchronous and asynchronous manner (p. 1).

In summary, the challenge for teachers according to what was stated by Abreu (2017) is “to take advantage of the potential of mobile devices to stimulate student learning through a didactic conception that allows us to overcome existing contradictions of the traditional model” (p. 2), that is, at the present time, they are a tool with a great educational potential at the service of current education, the same process that contributes to the technological teaching dynamic.

Advantages of using mobile devices in classroom-pedagogical scenarios

According to the analysis of the article “Guidelines for mobile learning policies” (UNESCO, 2013), the following advantages can be mentioned when using mobile devices in teaching-learning processes:

Figure 5
Advantages of using mobile devices in the classroom

Learning anywhere and at all times
Greater scope and reach opportunities
Facilitates collaborative learning
Greater portability and functionality
Maximum cost-effectiveness
Continuous learning improvement
Effective use of time
Ease for personalized learning
Enable instant interaction between teachers and students
They allow greater accessibility
Increased penetration
Mayor penetraci3n
Most economical technology

Source: the authors from UNESCO, 2013, pp. 9-28



To realize the advantages offered by mobile learning, policy formulation is recommended. In that regard, UNESCO (2013) notes the following measures:

- Create policies related to mobile learning or update existing ones.
- Train teachers to promote learning through mobile technologies.
- Provide support and training to teachers through mobile technologies.
- Create pedagogical content for use on mobile devices and optimize existing ones.
- Ensure the gender equality of students.
- Expand and improve connectivity options ensuring equity.
- Develop strategies to provide equal access for all.
- Promote the safe, responsible and healthy use of mobile technologies.
- Use mobile technology to improve communication management and education.
- Increase awareness about mobile learning through promotional activities, leadership, and dialogue (pp. 29-39).

147



Through the aforementioned policies, it can be determined at personal discretion that a characteristic feature of education may be the teacher's non-presence because connectivity encourages autonomous learning. The use of mobile devices certainly covers the needs of a massive dispersed population, in this sense, the only thing that should be guaranteed is the efficient use of these digital devices.

PACIE Pedagogy

Presence, scope, training, interaction, e-learning (PACIE in Spanish) is "a methodology that allows the use of ICT as a support to the teaching-learning processes that enhances the pedagogical structure of real education" (Camacho, 2019, p. 20). The new technological tools, since their inception, have become materials to be used in the process of student learning because they offer the ability to interact between students and teachers, where not only learning is developed, but also the sequence of knowledge is strengthened.

The PACIE methodology establishes the following phases:

- *Presence*: this first phase intends to create the need for the student to enter the virtual learning environment, that is, it seeks

Sophia 28: 2020.

© Universidad Politécnica Salesiana del Ecuador

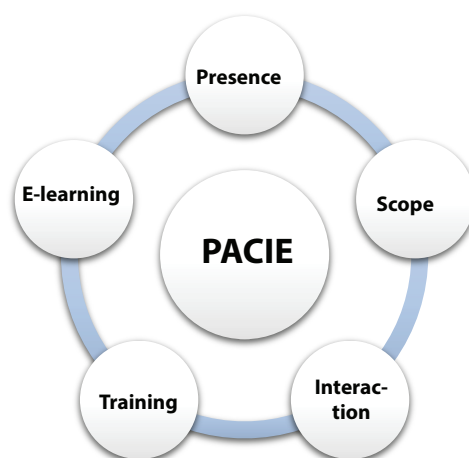
Print ISSN: 1390-3861 / Electronic ISSN: 1390-8626, pp. 135-156.

the student to be interested in the contents found in the virtual classroom. As Fierro (2015) points out, “the main objective of this phase is to implement a corporate image of the virtual learning environment that captivates students because of its interactivity and design” (p. 66).

- *Scope*: this phase consists of the definition of the objectives that will be achieved with the students on the virtual learning environment. The objectives include communication, information, support and interaction. There are three types of objectives: academic, experimental and tutorial.
- *Training*: promotes self-learning and motivation of students with the aim of stimulating the use of virtual resources and tools that allow them to acquire the desired knowledge.
- *Interaction*: Emphasizes the generation of knowledge through practice through the use of resources and activities developed in the virtual learning environment. It seeks to generate in students the skills that allow them to build their own knowledge to socialize and share information.
- *E-learning*: is to use all the technology that is available to everyone with the aim of generating interaction and knowledge in students within the virtual learning environment.



Figure 6
PACIE methodology phases



Source: The authors

The use of PACIE in virtual learning environments allows the integration of communication, exposure, and information through ICT. The objective is to generate interaction and collaboratively create knowledge.

The constructivist pedagogical model and its relationship with mobile learning

The constructivist version demarcates a process of personal-collective construction of new knowledge from existing knowledge in collaboration with colleagues and the facilitator. The constructivist model consolidates in the student the understanding of meaningful knowledge to solve some problematic situation, based on problem-solving skills.

It is mistakenly considered that constructivism leaves students free to learn at their own pace. In this regard, Ortiz (2015) notes:

In fact, what constructivism seeks is that there is an interaction between the teacher and the student, a dialectical exchange between the knowledge of both in such a way that a productive synthesis can be reached for both the student and the teacher (p. 93).

Therefore, mobile learning is a teaching-learning methodology that uses all kinds of mobile devices with a wireless connection to allow access to knowledge from any place and at any time. As noted by Brazuelo and Gallego (2011):

Mobile learning is an educational model that facilitates the construction of knowledge, the resolution of learning problems and the autonomous development of diverse skills or abilities through the mediation of mobile devices (p. 1).

Mobile learning are handheld mobile devices that have wireless connectivity. This type of connectivity allows for establishing space-time flexibility. The main advantage lies in the ease of everyday communication. This type of technology motivates students to learn.

The use of mobile devices, especially the cellphone, has been listed as an intruder in the classroom. However, it should be considered that children and young people currently use it daily, at all times and places. Mobile learning is presented as a new teaching process. Learning methods change radically due to technological advances and the dynamic nature of students. This is how Mejía (et al., 2014) indicates that:

Specifically, with smartphones you learn everywhere, in this way the student is conceptualized as a strategic agent that causes change and is



not waiting for the teacher to tell him what to do in his learning, this is how teachers become facilitators for the student to reach higher levels of knowledge through the use of mobile devices (pp. 7-8).

Mobile devices certainly cause changes in curriculum planning. These changes lie in the improvement of teaching materials since the teacher is forced to design learning tools, it is a way out of the comfort zone, since it was thought that presenting information on slides or Prezi was enough. The goal is to innovate in functions that attract students, as do the most famous video games or YouTubers in the world.

Ubiquitous learning for constructivist knowledge

Ubiquitous learning refers to the learning environments that can be accessed in different scenarios and situations, that is, it is learning that occurs anywhere, anytime. Ubiquitous learning underpins much of Vygotsky's proposal in dialectical or social constructivism. González (2012) indicates that "the knowledge generated will then be the reflection of the external world influenced by culture, language, beliefs, direct teaching and relationships with others" (pp. 23-24). With this assessment, it is determined that to learn one needs a cultural environment and interaction with others, because it is a social process.

In social constructivism, the role of the teacher is fundamental since it must consider the ecosystem and cultural identity that lead to the strengthening of customs, traditions to give new and transformed responses to the problems and challenges of interculturality, returning the leading role of the teacher in the social co-responsibility.

From the above, virtual learning is the connection between several groups of students in various pedagogical scenarios, even provoking the collaboration of distant people, which allows integrating the principles of constructivist learning. This causes updated social and learning.

Significant educational experiences of mobile learning in other countries

Currently, there are many educational experiences on the use of mobile learning for educational processes. In this regard, Olmedo (2016) notes:

- *MATI-TEC: Mobile learning for development and inclusion.* According to Olmedo (2016), it is a project funded by the Telefónica Foundation of Spain and developed by the Monterrey

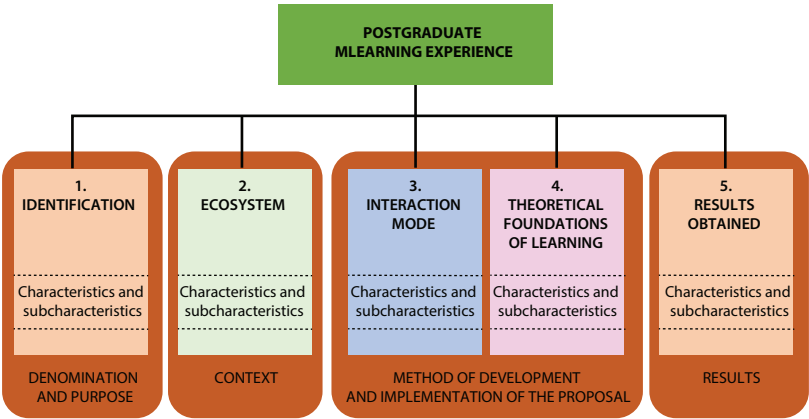


Institute of Technology and Higher Education, to improve the mathematical, reading-writing and technological skills of elementary school students in Mexico. MATI-TEC is a mobile application that supports the teaching-learning process and is used with students for accompaniment and participation inside and outside the classes. The educational community of the beneficiary schools intervenes. It is a comprehensive training project that is essential to achieve the objectives set within the teaching-learning process (Olmedo, 2016, pp. 7-13).

- *MADE-mlearn*. According to Herrera (et al., 2013), it is a project that envisions a scenario for the analysis, design, and evaluation of m-learning experiences at the graduate level. Based on their own background and a bibliographic review to investigate the subject. It is a proposal with theoretical emphasis that allows us to identify and characterize the experiences or projects of m-learning from the use of a series of attributes grouped into categories, which respond to axes of analysis. Methodologically, it is a framework supported by the study of previous work at the national and international level on educational practices and fundamentals linked to m-learning. Figure 7 shows the axes and categories for the analysis of m-learning experiences at the graduate level (Herrera et al., 2013, pp. 7-15).



Figure 7
Axes and categories of MADE-mlearn



Source: Herrera et al., 2013, p. 5



In addition, other educational experiences of the use of mobile learning can be pointed out, according to the analysis of the article “Mobile learning” of the Technological Observatory of the Spanish Ministry of Education (2011): at the University of Malaga, they have created pedagogical micromodules for mobile phones focused on Wap2 wireless technology. These educational scenarios complement the student’s training, through the classroom and the contents of the virtual classroom available via the internet. At the formal level they share the same design, characterized by its simplicity, but offer specific resources for each subject ranging from tests, animated graphics, glossaries, etc. The M-Learning Project jointly carried out by researchers from Italy, Sweden and the United Kingdom tries to use portable technologies to provide digital literacy and learning experiences for young people between 16 and 24 years of age. Mobile Autor is an application that helps teachers create and maintain their courses on virtual platforms. The AMB Project presents a dynamic that incorporates mobile video games for the development of problem-solving capabilities and concept learning (Ministry of Education, 2011, pp. 17-18).

All these applications of mobile devices made in other countries will serve as experiences to extrapolate in Ecuador. In addition, we must take advantage of new possibilities to learn through new scenarios of modern knowledge.

Uses in educational practice

According to the analysis of the article “The best educational applications on Android” from Spanish Ministry of Education (2012), are the following:

Table 1
Useful applications in educational practice

Type	Application	Academic Area
Language learning	Babbel. It allows language learning: German, French, Spanish, English, Italian and others.	Languages
	Voxy. Allows online teaching of the English language.	
	Bussu. Learning the English language.	
	Verbos españoles. It allows to consult conjugations of verbs, includes grammar and a search engine for translations	
Scientific and mathematical field	Solution Calculator Lite. It allows calculations for chemical solutions.	Chemistry

	Periodic table. It shows the elements of the periodic table.	Chemistry
	Anatomy 3D Free. For learning the anatomy of the human body.	Natural Sciences
	HandyCalc Calculator. Graphing calculator allows solving arithmetic and trigonometric operations, equations, exponential functions.	Algebra
	Google Maps. It enables locating anywhere on the planet, and display personalized information.	Social Sciences
	Google Earth. Through maps discover and explore cities and places around the world.	Social Sciences
	Países del mundo. It allows to discover geographic data: capitals, populations, situation, languages, flags of any country in the world.	Social Sciences
	Earth Now. It allows to see and manipulate a 3D reproduction of the globe.	Social Sciences
	Art Academy. It provides a virtual art gallery where there are more than 4,000 paintings by 700 different artists and 300 museums.	Social Sciences
	SkyMap. Constellations, stars, and planets are displayed.	Social Sciences
	TED. It is an application that integrates videos and audio of famous people in different fields of culture, technology, science, etc.	Social Sciences
Educational organizers and managers	Kingsoft Office (International). It is compatible with Microsoft Office which allows you to open and edit any text document, spreadsheets, presentations, etc.	General
	Edmodo. Application designed for mobile devices in teaching scenarios. It allows for creating different groups and sharing with them any type of information, educational material, work, alerts, events, etc.	
	Cuaderno del profesor. It enables optimizing the tasks: courses, schedules, personal agenda, records of evaluations, assistance, etc.	
	Homework. It serves for the teaching organization of schedules and tasks. Register: subjects, schedules, homework, and exams.	
	Ankidroid. Application to create flashcards, allow to memorize: languages, geography, names, works, etc. In addition, it allows the inclusion of images, audios, and videos.	
	Catch. Organizer of ideas, it allows the creation of notes.	
	Any.do. Task manager, allows you to take all kinds of notes, create lists (folders) and set alarms.	



Educational games	Apalabrados. Crossword game available in several languages.	General
	Holoholo. Use geolocation to show the most emblematic places in a city.	
	Wordshake. It is an interactive game that allows you to form words in English but against the clock.	
	Sudoku 10000. It has a great variety of interactive games.	
	Trivial Gems. It contains games of trivia.	
	Riddle Pic. It used for trivia games with questions about educational content seen in class such as characters, countries, flags, works of art, etc.	
	Ahorcado. It is an interactive game in which a word must be discovered before the drawing of a doll is completed.	
	Letrastro. It is an interactive game that requires the search of the greatest number of words against the clock.	

Source: the authors from the Spanish Ministry of Education, 2012, pp. 10-61



Conclusions

Currently, there is a large number of mobile devices connected worldwide, in a larger proportion are smartphones, so it is vital to use and strengthen the use of mobile learning in education. Mobile learning will allow one to improve learning due to the incorporation of mobile devices, as it allows one to be connected anywhere and at any time.

In Ecuador, there are meaningful figures, according to data from INEC (2018) the segment of the smartphone “grew 4.2 points compared to 2012, that is, it went to 41.4% of the population that has a smartphone” (National Institute of Statistics and Census-INEC, 2018, p. 23). This means that the use of mobile devices and especially smartphones, has increased in recent years, becoming a modern social and learning tool, with which simply connecting to the internet, from anywhere, facilitates autonomous and collaborative learning by promoting computational thinking in learning networks.

The PACIE methodology strengthens communication, collaborative learning and the organization of constructivist learning in a technological way, becoming social processes that contribute to significant learning by strengthening learning communities. Therefore, this methodology when applied in virtual pedagogical scenarios, becomes a motivating instrument for the development of knowledge. Ubiquitous learning is based on social constructivism, in which interaction with the

environment and the relationship with others is fundamental, and that is where the use of mobile devices facilitates students to develop knowledge, skills, and attitudes.

Worldwide there are several educational experiences of the use of mobile learning in teaching-learning processes. The results have been favorable, both for students and teachers because it has been observed that technology becomes a training tool for the construction of knowledge.

Bibliography

ABREU, Omar

- 2017 *Modelo didáctico para la Facultad de Ciencias Administrativas y Económicas de la Universidad Técnica del Norte de Ecuador*. Ibarra, Ecuador: Universidad Técnica del Norte.

AUSÍN, Vanessa, ABELLA, Víctor, DELGADO, Vanessa & HORTIGÜELA, David

- 2016 Aprendizaje basado en proyectos a través de las TIC: una experiencia de innovación docente desde las aulas universitarias. *Revista Formación Universitaria*, (9). Burgos, España.

BASANTES, Andrea, NARANJO, Miguel, GALLEGOS, Mónica & BENÍTEZ, Nhora

- 2017 Los dispositivos móviles en el proceso de aprendizaje de la Facultad de Educación Ciencia y Tecnología de la Universidad Técnica del Norte de Ecuador. *Revista Formación Universitaria*, (10). Ibarra, Ecuador: Universidad Técnica del Norte.

BRAZUELO, Francisco, CABERO, Julio & GALLEGOS, Domingo

- 2011 *Mobile Learning: los dispositivos móviles como recurso educativo*. Sevilla, España: MAD.

CAMACHO, Pedro

- 2008 *Metodología PACIE*. Recuperado de <https://bit.ly/2MSj1Uz/>

CHAMOCHO, Francisco

- 2016 *Mobile Learning: nuevas posibilidades, nuevos retos*. Universidad de Valladolid, España.

FIERRO, Aracely

- 2015 *Estudio de la metodología PACIE en las aulas virtuales para la enseñanza-aprendizaje de la asignatura emprendimiento y gestión en los segundos años de bachillerato general unificado en la Unidad Educativa Alberto Enríquez*. Ibarra, Ecuador: Facultad de Educación Ciencia y Tecnología, Universidad Técnica del Norte.

GONZÁLEZ, Claudia

- 2016 *Aplicación del constructivismo social en el aula*. Guatemala: IDIE.

HERRERA, Susana, SANZ, Cecilia & FENNEMA, Cristina

- 2013 *MADE-mlearn: un marco para el análisis, diseño y evaluación de experiencias de m-learning en el nivel de postgrado*. Universidad Nacional de la Plata, Argentina.

INEC

- 2018 *Tecnologías de la Información y Comunicación: Encuesta Multipropósito-TIC 2018*. Recuperado de <https://bit.ly/2Qw9mUi/>



- JARAMILLO, Liliana & SIMBAÑA, Verónica
2014 La metacognición y su aplicación en herramientas virtuales desde la práctica docente. *Sophia, Colección de Filosofía de la Educación*, (16). Quito: UPS.
- MARQUÉS, Pere
2012 Impacto de las TIC en la educación: funciones y limitaciones. *Revista de Investigación 3 Ciencias*. Barcelona, España.
- MEJÍA, Juan, SÁNCHEZ, José & VIZCAÍNO, de Jesús
2014 *Modelo conceptual de m-learning como innovación para la gestión del aprendizaje*. Universidad de Guadalajara, México.
- MINISTERIO DE EDUCACIÓN DE ESPAÑA
2011 *Móvil learning*. Recuperado de <https://bit.ly/2Q6wHgu/>
2012 *Las mejores aplicaciones educativas en Android*. Recuperado de <https://bit.ly/2F4aZU9/>
- OLMEDO, Juan
2016 *Aprendizaje móvil para el desarrollo y la inclusión*. México DF: Paidós.
- ORTIZ, Dorys
2015 El constructivismo como teoría y método de enseñanza. *Sophia, Colección de Filosofía de la Educación*. Quito: UPS.
- PACHECO, Albertp & ROBLES, Julio
2006 *M-learning: educación y capacitación móvil*. Recuperado de <https://bit.ly/2QmrNe4/>
- RAMÍREZ, Soledad
2009 Inclusión del mobile learning en ambientes virtuales de aprendizaje. *Revista Experiencias de Innovación Docente Universitaria*. Universidad de Salamanca, España.
- SALGADO, Maria, SEVILLA, Maricela & RAMÍREZ, Hilda
2016 Evaluación pedagógica de la aplicación móvil “Buscando letras”, un recurso didáctico innovador en educación primaria. *Revista Iberoamericana de Producción Académica y Gestión Educativa*. Universidad Autónoma de Baja California, México.
- SANTIAGO, Raúl, TRABALDO, Susana & KAMIJO, Mercedes
2015 *Mobile learning: nuevas realidades en el aula*. Barcelona, España: Océano.
- SHULER, Carly, WINTERS, Niall & WEST, Mark
2013 El futuro del aprendizaje móvil: implicaciones para la planificación y la formulación de políticas. *Revista de la UNESCO*.
- UNESCO
2013 *Directrices para las políticas de aprendizaje móvil*. UNESCO.
- VIRACOCCHA, Carlos
2017 *Uso de dispositivos móviles y desarrollo de habilidades sociales en adolescentes*. Quito: UCE.

Document receipt date: July 15, 2019
Document revision date: September 20, 2019
Document approval date: November 15, 2019
Document publication date: January 15, 2020



SOCIAL IMAGINARIES ABOUT THE USE OF TECHNOLOGY AND INTERPERSONAL RELATIONSHIPS IN UNIVERSITY STUDENTS THROUGH FICTION FILMS AS A DIDACTIC RESOURCE

Imaginarios sociales sobre uso de tecnología y relaciones interpersonales en jóvenes universitarios a través del cine de ficción como recurso didáctico

JULIO CUEVAS ROMO*

Universidad de Colima, México

jcuevas0@ucol.mx

Orcid Code: <http://orcid.org/0000-0003-1325-4029>

Abstract

From the use of fiction cinema as a teaching resource, an educational experience is exposed with students of the Bachelor of Mathematics Teaching who participated in a film debate cycle focused on science fiction and possible worlds. Multiple have been the approaches that have been given to the cinema within the educational processes, however, to consolidate and systematize this potential, a categorization is proposed based on the didactic objectives starting from the most common uses. Through observing the film *Her*, the social imaginaries of young people are analyzed regarding the use and abuse of technology and how this impacts on interpersonal relationships. The work methodology focuses on what Torres (2015) proposed as a conceptualization of social imaginary and its potential within the processes of educational intervention, complemented by the construction of open question instruments with the proposed by Pérez-Millán (2014) to the analysis of audiovisual products. The results corroborate some aspects regarding the position of young people, regarding virtual spaces of socialization and their impact on face-to face spaces in previous research as Ruelas (2013) or Sosa (2018). Social imaginaries that are detonated from fictional narratives such as cinema can be used to carry out specific educational interventions.

Keywords

Narrative, social imaginary, communication technology, teaching material, alternative education.

Suggested form of citing: Cuevas, Julio (2020). Social imaginaries about the use of technology and interpersonal relationships in university students through fiction films as a didactic resource. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 159-176.

* Doctor of Education from the University of Guadalajara. He is currently a full-time professor-researcher at the Faculty of Education Sciences of the University of Colima where he coordinates the Master in Educational Intervention. Member of the National System of Researchers since 2012. Research lines: teaching and learning processes of science and mathematics in contexts of diversity and scientific vocations.

Resumen

A partir del uso del cine de ficción como recurso didáctico, se expone una experiencia educativa con estudiantes de la Licenciatura en Enseñanza de las Matemáticas, que participaron en un ciclo de cine-debate centrado en ciencia ficción y mundos posibles. Múltiples han sido los abordajes que se han dado al cine dentro de los procesos educativos, sin embargo, para consolidar y sistematizar este potencial, se propone una categorización en función de los objetivos didácticos partiendo de los usos más comunes. A través de observar la película *Her*, se analizan los imaginarios sociales de los jóvenes respecto al uso y abuso de la tecnología, y cómo esto impacta en las relaciones interpersonales. La metodología de trabajo se centra en lo propuesto por Torres (2015) como conceptualización de imaginario social y su potencial dentro de los procesos de intervención educativa, complementado con la construcción de instrumentos de pregunta abierta propuestos por Pérez-Millán (2014) para el análisis de productos audiovisuales. Los resultados corroboran algunos aspectos respecto a la postura de los jóvenes en cuanto a los espacios virtuales de socialización y su repercusión en los espacios presenciales, en investigaciones previas como las de Ruelas (2013) o Sosa (2018). Los imaginarios sociales que se detonan a partir de las narrativas ficticias como el cine, sirven de base para realizar intervenciones educativas específicas.

Palabras clave

Narrativa, imaginario social, tecnología de la comunicación, material didáctico, educación alternativa.

160



Introduction

Far are the educational perspectives or positions that placed audiovisual products —mainly television— as the enemy to overcome. Currently, it is impossible to talk about the negative or positive consequences of these products per se, rather it is about, from a critical position to analyzing the reflective and educational potential that television, film or streaming can have.

The following sections describe the position regarding the use of audiovisual media, in particular, cinema, to educate, reflect and learn how certain aspects of reality are perceived, in this case with young undergraduate students, with the objective of knowing their social imaginary regarding the current use of technology, in particular smartphones, virtual spaces, and their consequences.

The first section describes a systematization and basic classification of cinema as a teaching resource, recognizing its main characteristics and the most common uses. The second section deals with the theoretical posture of research, taking as a central element the concept of social imaginary and its link with education from a constructivist learning posture. The third section describes the selection of the film *Her* as a teaching resource to use with students, mentioning and explaining its relevance to detonate the social imaginary of interest. The fourth section describes the profile of the participating group and how it was integrated. The fifth section explains the analysis methodology based on the proposal by

Pérez-Millán (2014). Finally, in the last two sections, some guidelines and reflections on the process are reflected upon.

Fiction cinema as a teaching resource

For Wood and Gudiño (2017a) there is not a definition of what educational cinema is, or the role of cinema in teaching-learning processes. On the other hand, it is undeniable that everyone, or almost everyone, has met with teachers who at some time in their classes turned to a film to teach, exemplify or emphasize something related to the contents of their class. Based on the above, it may be irrelevant to try to find a universal definition of what educational cinema is, but it can be very useful to consider the educational use or uses that can be given to films, both fictional and documentary. In recent years there has been a need to continue looking for operational didactics for cinema in educational processes, from dissemination to more specific pedagogical processes, something that, fortunately, many professors, disseminators, and researchers are trying to consolidate.

Several authors have given themselves to this task. There are, therefore, multiple uses, approaches, categories, and debates about the intentionality of cinema as a teaching or didactic resource. To a lesser extent, but also for this purpose, systematizations similar to other media product formats have been made in teaching processes such as the comic or, more recently, the streaming series of platforms such as Netflix or Amazon Prime. It is considered that, although there are significant differences between the cinema, streaming or comic formats, for educational purposes and in particular of this contribution, the analysis process presented here can be applied to any of these products, all seen as sequenced narratives where Images predominate.

In another era, it was said that television (or cinema) educated or rather was a bad influence because this argument used to occur in a negative connotation. This perception, often transformed into prejudice, has been diluted, in large part, by considering that audiovisual media is not the element to be overcome by the educational system, but that education for the media is necessary. This also gives rise to the analysis of intentionality in the use of these formats-products in educational processes. This intention can occur in two ways.

The first one includes the products or in this case, the films that are intended as educational form the start, that is, they were made for



that purpose. These films are not exclusively on the documentary genre; however, they are the most representative or, in any case, used because they are considered more objective or different from intentional fiction. Although documentary cinema tries to show particular reality from events captured in an audiovisual manner, in the end, it is presented in an edited, segmented way and with one or several specific and intentional ideological objectives, since the purpose is to convince the audience. The filmmakers send an interpretive message for the recipient or even a tendency for indoctrination. Even so, it is considered a product with greater fidelity to everyday reality than fiction cinema.

The second intentionality refers to films that were not designed to teach or educate, but can be used for this purpose. In this second intentionality is where the audiovisual narratives belonging to genres of fiction are located, to which the film that interests in this case, *Her*, directed by Jonze in 2013 belongs. For this work, the genre of fiction also requires a basic classification that, according to what was proposed by Wood and Gudiño (2017b, 2017c), could identify two central categories.

On the one hand, there is fiction cinema located in an identifiable reality, where biographical films or reinterpretations of historical periods come in, but which are intended to be true to life like *Bohemian Rhapsody* (Singer, 2018), *Lincoln* (Spielberg, 2012) or *The Imitation Game* (Tyldum, 2014). Also within this category, one can place films that, although they do not focus on specific biographies, they do link directly with fully identifiable historical passages and are made in a context that shows some characteristics of a specific historical period, such as *Gladiator* (Scott, 2000), *Inglourious Bastards* (Tarantino, 2009) or *The Labyrinth of the Faun* (Del Toro, 2006). The latter, despite being a classic of the fantasy genre, illustrates very clearly and correctly some elements of the context of the Spanish civil war.

On the other hand, following the fictional narratives, there is fiction cinema that is oblivious to an identifiable reality, mainly the genres of fantasy or science fiction. Although, in effect, they were not thought of as educational products, their potential for reflection or learning is based on what they allegorize, as stated by Mejía and Nahmad (2017). These movies resignify the reality from the creation of other worlds. The observers know that what they are watching is not real, but they focus their attention on the 'realism' of the internal coherence and narrative of the world created by the authors (something very similar to the literature). In the case of fantasy cinema, well-known examples such as *The Chronicles of Narnia: The Lion, the Witch, and the Wardrobe* can be found (Adams,



2005). This —like many stories full of fantastic elements— allegorizes identifiable situations or dilemmas such as the search for power, parental relationships or the harshness of war and its impact on children.

As for science fiction cinema, it is pertinent to make a subdivision to help understand the educational potential that it can provide. In the first instance, some films belong to another genre such as comedy, horror, adventure or drama, but that incorporate identifiable elements of science for the development of their plots. Specific examples are *Inception* (Nolan, 2010), *Terminator* (Cameron, 1984) or *Star Trek* (Abrahams, 2009), although the latter, unintentionally according to its creators, has been one of the most successful in predicting real technological advances since the 60s such as cellphones, interactive screens, magnetic resonance or even some fundamentals of interstellar travel. This set of films, although far from presenting possible scientific or technological elements such as time travel, teleportation or autonomous technology, interestingly are the ones that have been most used for teaching. Why? Most likely, beyond their popularity, it is because, presenting unlikely elements in contrast with scientific facts, become, precisely, an excellent excuse for a counterargument. Why can't anyone jump as Hulk does? Why is it impossible that there is a being the size of *Godzilla*? Why can't there be explosions in space like in *Star Wars*? Why can you travel to the future as stated by Stephen Hawking, but not to the past as in the *Edge of Tomorrow* or *Terminator* movies? These ideas, so widely accepted while they are observed on the screen, but as far away when we discuss them as something possible, are simple to compare with known technology and science, therefore, they require precisely a minimum of notions to be refuted, making an excellent tool for discussion in introductory courses to scientific disciplines or with students of basic levels.

Continuing with science fiction, there is the other extreme, that is, films that, although it is true, have a relevant number of fictional elements, the core part of their plot revolves around phenomena very close to our reality. Movies such as *The Martian* (Scott, 2015), *Gravity* (Cuarón, 2013) or *2001: A Space Odyssey* (Kubrick, 1968) are clear examples of this by realistically addressing issues related to space travel. These films place the viewer, in general, in near recognizable futures and are usually advised, both in the script and in the visual aspect, by renowned scientists, such as Kip Thorne, Nobel Prize in Physics, who participated directly in films such as *Contact* (Zemeckis, 1997) or *Interstellar* (Nolan, 2014), both as clear examples of narrative fidelity in terms of physics, astronomy and relativity. The didactic potential, in this case, is the inverse of the counter-



argument. It focuses on the discussion and reflection on real possibilities of what the viewer observes according to the area of knowledge or content that they want to address. Unlike the counter-argument, its use and teaching potential are recommended for students who already have some mastery of the subject.

Both subdivisions, argumentation, and counter-argumentation from science fiction films have their didactic potential in addressing content related to science and technology of a more disciplinary in nature. In Figure 1 you can review a synthesized diagram of the educational potential of audiovisual narratives from the cinema, depending on their intentionality.

For the case of interests in this contribution, the reflections that the students can derive from observing and discussing the movie *Her* could be placed in the category of those that reflect on a reality very close to our daily life, our present or near future. However, we can refer to a third subdivision for the didactic use of science fiction cinema, regardless of whether the films in question belong to any of the fictional genres already mentioned.

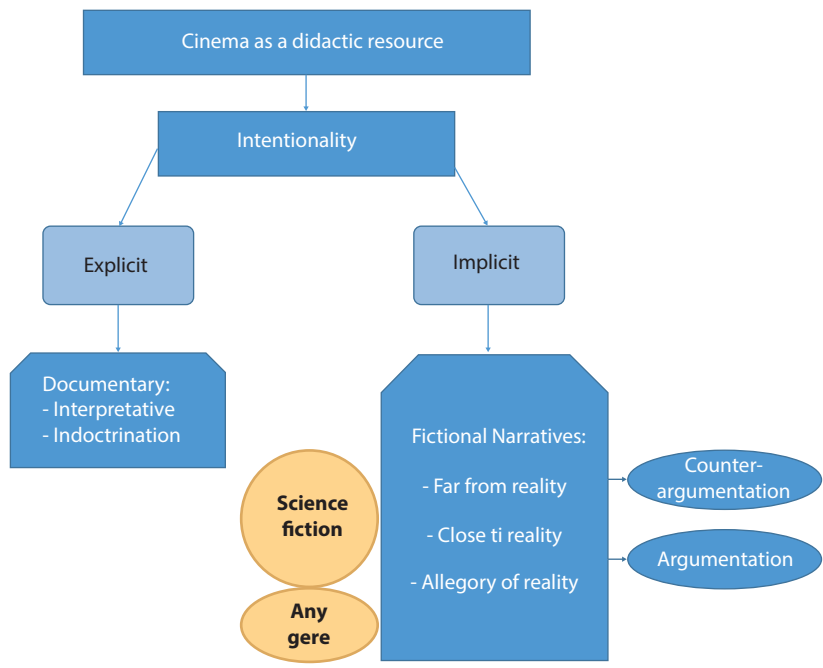
It is here that the concept of 'social imaginaries' becomes relevant, which can be identified by observing and analyzing films as a detonating teaching resource. The imaginaries illustrate postures and behaviors linked to our actions as human beings, hence, most of the aforementioned films can be useful.

What kind of profile do scientists, technologists, and users on those narratives? Who and how do they use technology? With what variations? What is their activity? What are the motivations of the characters? What ethical difficulties and dilemmas do they face? Specifically: What characteristics of our reality are identifiable in fictional characters whose actions are familiar to us, either by identification or rejection? Under what ethical principles and what kind of uses are given to technology in these specific stories?

This contribution analyzes the social imaginary about the use of technology, particularly that of smartphones and their impact on interpersonal relationships exposed by a group of university students belonging to the Bachelor of Mathematics Teaching, from watching the movie *Her*. For this, first, some basic elements on the concept of social imaginary are provided, as well as the categories proposed by Pérez-Millán (2014) for the analysis of audiovisual material.



Figure 1
The schematization of the didactic potential of cinema



Source: the author

Social imaginary

Scientific and technological work has been represented in multiple ways in the cinema, television and comic. Many of these representations generate beliefs, stereotypes and, consequently, attitudes in those who consume these products of visual or audiovisual communication. This, in part, influences their position towards scientific vocations and the way they appropriate, reinterpret or reject the construct of scientific or technological work.

There is an explicit intent of those who make a television series, movie or comic, to transmit a message, establish communication with the receiver. Active observers, by consuming the product, are choosing to establish that communication, either by integrating, rebuilding or rejecting the message according to their cognitive scheme, as stated in the constructivist principles of learning. This process is mediated by previous experiences and expectations that the social system has generated. In this

sense, the concept of social imaginary is useful to understand how this process loaded with context, understatement and prejudices are naturalized, as Torres (2015) comments.

The concept of social imaginary, according to Randazzo (2012), has been ambiguous, therefore, its use has been as ambiguous. Sometimes it is understood as ideology, worldview, collective consciousness, perception or mentality, resulting in a problem of lack of rigor, at least at a conceptual and methodological level, generating intuitive interpretations. It is necessary, then, to delimit it and work it systematically.

From the educational scientific field it is pertinent to turn to the teaching-learning perspectives, so the definition proposed by Pintos (2015), who places the social imaginary as socially constructed schemes that can guide our perception, allow our explanation in, and make a possible intervention in what in the different social systems have deemed as reality, is quite useful.

For those who are familiar with pedagogical theories, the notion of schemas and knowledge construction will certainly remind them of constructivist approaches to learning. Without eagerness to enter into debate between the two great lines that derive from learning from constructivism—such as the sociocultural constructivism raised by Lev Vygotsky and Piaget's psychogenetic constructivism—, knowledge-building schemes only acquire meaning insofar as they interact with previous knowledge concerning any concept, they are in permanent reconstruction based on new experiences and learning, sometimes incorporating the new into these previous schemes, and, on other occasions, rejecting it and maintaining or reinforcing the schemes as they are.

Thus, the definition of Pintos is not only useful and pertinent, but it also positions us in a constructivist learning posture, at the same time that it is compatible with the arguments argued by Torres (2015), who says that the social imaginaries are communicative simplifications, which can serve as a detonator, in this case, an audiovisual message that connects with our previous knowledge scheme, either to incorporate the new information, reinterpret or reject it.

The social imaginary has to do with the different visions of the world, constituting itself as a form, in constant change, of expression and indirect mechanism of reproduction. It generates consequences of collective identity and hence the relevance of turning to the products and media representations that they reflect, but at the same time, they build an identifiable reality, either in everyday terms or through allegory.



For example, when watching a movie, one can think about the social imaginary that can be had about technology, its uses, and its consequences. We all have an imaginary about technology and its impact on everyday life whether from experience as users (internally) or how we perceived from other users (externally), as well as the positive or negative impacts that we perceive it to generate.

There are a series of assumptions, behaviors and social norms around the technology that is used every day, specifically to communicate and interact. What happens when technology is exposed, from a specific narrative to a type or types of users who comply with these assumptions and norms? Or, in the opposite direction, what is triggered if it is observed that someone defies these norms or takes them to the extreme? It is not possible, in effect, to show in full, all those assumptions that guide a user's action towards technology, however, it is possible to raise certain situations where the implications of that use can be made visible. One can think of a realistic and dramatic film like *The Social Network* (Fincher, 2010) or with political tones like *Snowden* (Stone, 2016); both narratives warn to some extent of the phenomenon of large scale of communication mediated by technology that is occurring today, but the narratives are distant from the point of view of the users.

In this sense, the fear of the dangers arising from the dependence on technology to interact, represented in products such as the British series *Black Mirror* (2011) of the Netflix platform, has a much greater impact, since common users are those who suffer the technological uses and abuses in narratives that go from comedy to horror, but always with negative consequences for the excesses and dependence on technology in everyday life. This type of phenomenon is not new, of course. For example, in the 1960s, audiovisual narratives abounded that reflected the fear of a possible atomic war in the real framework of the Cold War and the proliferation of nuclear weapons.

In these narratives, as in any case of applied technology, artificial intelligence or virtual communication cannot be classified as good or bad per se, but it is the actions carried out by specific individuals that provokes a response in the viewer. For this position to materialize, there must previously be the 'must be', the explicit and implicit rules and regulations so that the observer can compare how the characters defy to the established norm.

It comes into play, then, when communication is established, in this case between the observer and the film, the socially learned code, which helps us to build our imaginary and our position towards the ac-



tions that someone performs. The self-descriptions we receive on these products are shown with the idea of being a faithful image of a complex system. That is, the overall complexity, in this case of the imaginary of the use of technology and its impact on socialization, cannot be described, but the narratives from these simplifications or descriptions that are presented can. What social imaginary about the uses and abuses of technology and its impact on our way of socializing are identified from a fictional narrative? How are these representations incorporated into the previous schemes, or are they rejected as the case may be?

The movie *Her* as a teaching resource

168



Directed by Spike Jonze and starring Joaquin Phoenix in the role of Theodore (who received very positive reviews), *Her* premiered in 2013. Considered a film more oriented towards awards and critics than success at the box office, addresses the unusual relationship between a common man and his operating system, a kind of highly advanced system based on Siri, a real design of the Apple company, which in the film is given voice by the actress Scarlett Johansson.

Unlike movies like *A.I.* (Spielberg, 2001) or the most recent, *I Am Mother* (Sputore, 2019), where the affective relationship between humans and robots is still present in a distant or unreal future, possibly the most disturbing thing in *Her* is that it precisely presents a very familiar setting. Without providing an exact date, the narrative places us in the very near future, with conditions almost equal to those present.

The very operating system, far from a futuristic design, is relatable to us, it has no physical presence, it is limited to a voice with which to interact through a device that we currently own, our smartphone. The great achievement of the narrative is, without a doubt, how natural and plausible the progressive sentimental relationship of man with his device can be, while he increasingly isolates himself from human beings. It is not the purpose of this contribution to make a film review or criticism, however, a very brief description of the characters is important so that the analysis with the students can be better understood (it is recommended, of course, to watch the film).

Rooney Mara, as Catherine, the ex-wife of Theodore, still has a certain affection for him, but at no time shows regret of being separated, she is the only one who reacts negatively to Theodore's sentimental relationship with his operating system. Amy Adams, as Amy, playing the best

friend of Theodore, also newly divorced, is the one that shows more empathy with towards him, is understood in several sequences that she could feel more than empathy for Theodore, she never judges him negatively, however, he only sees her as a friend. Chris Pratt and Laura Kai Chen, play Paul and Tatiana, a couple who are work friends of Theodore, although they are supportive and respect his new lifestyle —they even see it as normal to attend a double date with Theodore and his operating system without judging— they don't get too involved in investigating Theodore's feelings, so they can somehow be considered a kind of superficial friendship. Besides, there is a brief, but an illustrative cameo by Olivia Wilde (the name of the character is not mentioned), being a woman who goes to a blind date with the protagonist, with negative results for both.

As stated, it was important to make this description since part of the exercise carried out with the students was to identify or reject the behaviors that these characters present in the narrative. As a science fiction product, after all, it is not about technology, but about analyzing ourselves, humans, in our present, on how we glimpse the future, how we interact and our ability to deal with it.



Participating group

The 12 students participating in this project are studying a Bachelor's Degree in Mathematics Teaching, between the fourth and sixth semesters, at the Faculty of Education Sciences of the University of Colima. Although this analysis focuses on the imaginary of the use of technology and its impact on socialization, it is important to mention that they attended during a whole cycle dedicated to the science fiction cinema called Possible Worlds, focused on films with utopian and dystopian narratives, both current and from several decades ago.

This cycle was organized in conjunction with the House of the Historical Archive of the Municipality of Colima, where the ten projections were made during the period January-July 2019. Although the students are the ones who carried out the formal follow-up process, that is, to answer the written instruments, the projection of the films was open, so they had the opportunity to listen to opinions outside the group and interact with another type of audience. Participation was by open invitation and desire to attend.

Methodology and instruments

The methodological challenge to have an approach to the social imaginary of the students from watching the movie requires, in the first instance the selection of an audiovisual trigger, to subsequently make the inquiry from the (simplified) narrative of the film, which, as already mentioned, it does not present the problem in all its dimensions and complexity, but it can describe its impacts or consequences on the protagonists, which can in turn cause self-descriptions in the viewer, making possible the explanations and postures of the socially learned, previous experiences or knowledge.

To explore the above, some of the categories proposed by Pérez-Millán (2014) for the analysis of audiovisual material were grouped, omitting the technical categories, resulting in two axes of analysis:

- *Reading of meaning.* Referred to the internal rules of the fictional universe and the internal coherence of the narrative. It includes the set of implicit values that the audience accepts as true for the narrative.
- *Motivations of the characters.* Referred to what each character looks for individually and, where appropriate, at the collective level. Their respect or disdain for the internal rules or values mentioned in the previous point, in addition to the way they interact with the rest of the characters. Here you can also see the personal identification of the students with some of the characters, including the recognition of experiences or circumstances, although not necessarily with their reactions within the story.

The design was framed, as already mentioned, in an exercise within a broader cycle of debates that covered ten film sessions with their respective discussion, which consisted of three stages:

- The first of the stages was the application of a questionnaire with four open questions prior to the screening of *Her*, a film that no one had seen. These questions do not address the film but rather the students' point of view as to how important the relationship with technology is, especially their cellphones and social networks and how this affects their daily lives, both positively and negatively. The questions focused on the time dedicated to virtual spaces, the type of activities they perform in these and how they relate to other people, both virtual and



face-to-face, as well as asking if they have a preference for any of these two types of interaction.

- The second stage consisted of the projection of the film with an open debate about their opinions and their perception of the proximity or distance of what was seen in the narrative regarding everyday life. Although a post-film debate was opened, it was free and, as already mentioned, anyone attending the screening could participate. There was no driving axis as such, but general ideas about what they found most relevant were rescued. The students, in this case, linked it to the initial questionnaire.
- The third stage was the application of a two-block instrument. The first block, again, with four open questions, this time focused on the film with the main objective being to rescue their opinion regarding identifying specific situations of the narrative in their current or recent experiences, either as protagonists or as observers. The second block consisted of showing the seven photographs of the protagonists, both the main and the secondary ones, already described in a previous section, with the instruction that they mention which one they identified more with and which one they identified less, in both cases providing arguments.



Guidelines, reflections, and teaching potential

Although part of the questionnaire and the final block of identification with the characters can open a pattern for a more quantitative systematization, the richness of the analysis based on the purpose of identifying the social imaginary focuses on the qualitative data derived from the open questions and the reasons for identifying the last block, where the specificities arise.

In this sense and using the two axes derived from the proposal of Pérez-Millán, the reading of meaning and the motivations of the characters were mostly referenced (10 of the 12 cases) to personal experiences and postures, something very noticeable in their arguments, because these 10 students tried to put themselves in the place of the characters, or in their case, exposing hypothetical reactions, 'what they would have done in the place of...'. For the other two, it occurred in a more subtle way, issuing judgments or assessments in the third person.

It should be noted that, although the film presents the ultimate stage of virtual relationships, that is, the human operating-system rela-

tionship from the affective, only two students considered this possible. Approximately half of the participants think that this type of relationship is not and will not be possible, the other half suggests that perhaps in the distant future but under circumstances that still sound impossible, such as the ability to express affection on the part of a machine. This is important, since, in this narrative, as in many others that deal with artificial intelligence and human emotions, there is no possibility that machines feel affection, but that they can imitate it, a principle proposed by Asimov several decades ago.

At this point it is relevant to mention that, although the film does show that the ability of the Samantha operating system is to imitate human dialogue, participants consider it impossible to relate to a machine, considering, in any case, a remote possibility that machines gain this ability to feel or express affection. Only one of the participants mention that one of his little brothers was emotionally affected by his videogame console, however, this contribution was lost as humor.

Regarding the addiction to a device or the virtual interaction vs face-to-face interaction, the 12 participants did consider that it is a current problem in which they are involved and live it daily, although they do not perceive serious consequences at the moment, attributing control or individual willpower as the main factor so that the problem does not 'exceeds them'.

It is also striking that 9 of the 12 participants are convinced that in some way it is 'easier' to interact virtually than in person and that this interaction can be permanent, although they also affirm that they value (even) more face-to-face interactions, where they mainly categorize family relationships. Some, mainly those who are married, said that virtual interactions have caused problems in their relationships, feeling, in some cases, ignored because of excessive use of devices by their partners.

Their perception coincides to a certain extent in the approaches of Ruelas (2013), who points out that mobile devices are being used as instruments of privatization of public spaces and in turn, private spaces are being lost due to the large amount of interference caused by these devices.

He states that these two spaces are not the only ones that blur their boundaries. On the one hand, there is the transformation of people's behavior concerning spaces, specifically between work and entertainment and on the other, the loss of identity due to the entry of technology, especially the cellphone.

In that sense, they were able to identify these behavioral transformations and the loss of identity in the virtual space. The totality of

the students identified with the ‘ignored characters (Amy and Catherine mainly), in no case with the ‘technology addicts’ who ignore others. As an additional comment, no one, in any case, identified with the protagonist. With the consideration that in the first instrument everyone spoke, to some extent, about the waste of time that the devices generate as something negative in their daily lives, that is, the problem was identified, it is experienced every day and it suffered, but they do not assume themselves as generators of it.

More than half of the students responded that one of the disadvantages of virtual communication was not knowing the voice tones and expressions of the people with whom they are interacting, precisely the selling point of the Samantha operating system in the plot, its capacity of imitating expressions and tones of voice.

The disadvantages and advantages that young students identify coincide, to a certain extent, with those raised by Sosa (2019). The responses collected show that the time invested in virtual space or with devices is mainly for entertainment, not for work, academic or family relationships. At any time, however brief it may be, ‘one can escape’ and get distracted. In this sense, there are certain contradictions in their responses. For example, they see the possibility of communicating with close relatives as an advantage, while claiming that with the use of this technology there is less and less family interaction.

In addition to considering wasted time as a disadvantage, in almost all cases, a significant part spoke of being vulnerable to attacks by third parties, a kind of cyberbullying, however, they never talked about putting themselves in a state of vulnerability, but by actions someone else. They did not identify consequences beyond these two negative factors: time and external vulnerability. No student, as in the case of identifying with the characters with addiction problems, assumed himself as someone who infringes on others.

Conclusions

The use of cinema in particular and audiovisual media in general as a teaching resource, today more than ever is feasible due to the massification and proliferation of streaming, which is accessed both for free and in paid formats. The use of these products, which long ago could be perceived as a distractor or a natural enemy of formal education, can now be



conceived as an element that also educates, of course, from a critical and systematic perspective, having specific purposes.

In this case, the methodological design based on the proposal of Pérez-Millán for the analysis of audiovisual content and the use of social imaginary in a constructivist perspective of learning has allowed, as we could see, to approximate how a group of young people perceive their reality, in this case, concerning the use and abuse of technology.

Although the students did not deepen their discussions with the central implications of artificial intelligence, the film *Her* as a trigger was a productive link to know their social imaginary regarding what they observed. It is clear what they identify as negative in the abuse of the devices, what they suffer, but also what they deny or at least assume that it does not apply to them. Undoubtedly, in addition to knowing these imaginaries, this gives us guidelines to more deeply address them from school.

In this intervention, it has been shown that it is possible to approach the perception of specific groups regarding how they interpret certain realities, as posed by various authors who address the social imaginary, in this case: undergraduate students familiar with the use of technology. This gives us guidelines not only to know their perception of reality but to reflect on how they can intervene in it, a fundamental task for those who are immersed in the educational field.

Although a single narrative was used in this intervention, the proposal can be extrapolated. Audiovisual narratives educate, guide and induce us, usually unconsciously and outside the school space, to build the social imaginary that we are gradually naturalizing and projecting. In other words, they not only reflect our reality, but they build it, hence the enormous relevance in the educational and scientific level of entering their analysis to make transformations.

Bibliography

- ABRAMS, Jeffrey (producer and director)
2009 *Star Trek* [Película]. EUA: Bad Robot; Spyglass Entertainment; Paramount Pictures.
- ADAMSON, Andrew (director)
2005 *The Chronicles of Narnia: The Lion, The Witch and the Wardrobe* [Película]. EUA: Walt Disney Pictures; Walden Media.
- CAMERON, James (director)
1984 *Terminator* [Película]. EUA: Pacific Western; Hemdale Film Corporation.
- CUARÓN, Alfonso (producer and director)
2013 *Gravity* [Película]. EUA: Warner Bros.; Esperanto Filmoj; Heyday Films.



- DEL TORO, Guillermo (director)
 2006 *El laberinto del Fauno* [Película]. España-México: Estudios Picasso; Tequila Gang; Telecinco; Sententia Entertainment.
- JONZE, Spike (director)
 2013 *Her* [Película]. EUA: Warner Bros.
- KUBRICK, Stanley (productor y director)
 1968 *2001: A Space Odyssey* [Película]. RU-EUA: MGM; Stanley Kubrick Production.
- LIMAN, Doug (director)
 2014 *Edge of Tomorrow* [Película]. EUA: Warner Bros.; 3 Arts Entertainment; Viz Media.
- MEJÍA, José & NAHMAD, Ana
 2017 Discusión teórica I y II de cine de no ficción [Archivo de video]. En *Usos didácticos del cine: introducción al análisis*. México DF: UNAM.
- NOLAN, Christopher (director)
 2014 *Interestelar* [Película]. EUA: Warner Bros.; Syncopy Production; Paramount Pictures; Legendary Pictures.
 2011 (productor y director). *Inception* [Película]. RU-EUA: Warner Bros.; Legendary Pictures; Syncopy Production.
- PÉREZ-MILLÁN, Jorge
 2014 *Cine, enseñanza y enseñanza del cine*. Madrid: Morata.
- PINTOS, José
 2015 Apreciaciones sobre el concepto de imaginarios sociales. *Miradas: Revista de Investigación*, 13, 150-159. Universidad Tecnológica de Pereira, Colombia.
- RANDAZZO, Francesca
 2012 Los imaginarios sociales como herramienta. *Revista Imagonautas*, 2(12). Recuperado de <https://bit.ly/37lcYzE/>
- RUELAS, Ana
 2013 *El teléfono celular: su incorporación a la vida social*. México DF: Juan Pablos Editor.
- SCOTT, Riddley (director)
 2001 *Gladiator* [Película]. RU-EUA: Universal Pictures; DreamWorks SKG.
 2015 *The Martian* [Película]. EUA: 20th Century Fox; Scott Free; TSG Entertainment.
- SINGER, Bryan (director)
 2018 *Bohemian Rhapsody* [Película]. RU-EUA: GK Films.
- SOSA, Dolores
 2018 *Relaciones interpersonales entre los jóvenes universitarios y los espacios de presentación virtual*. Ponencia del XII Simposio Internacional Educación y Cultura, La Habana, Cuba.
- SPIELBERG, Steven (director)
 2001 *A.I.* [Película]. EUA: Warner Bros.; DreamWorks SKG; Amblin Entertainment; Stanley Kubrick Production.
 2012 *Lincoln* [Película]. EUA: 20th Century Fox; DreamWorks SKG; Amblin Entertainment.
- SPUTORE, Grant (director)
 2019 *I Am Mother* [Película]. Australia: Penguin Empire; Rhea Films; Southern Light Alliance; Southern Light Films.



TARANTINO, Quentin (director)

2009 *Inglourious Bastards* [Película]. EUA-Alemania: Universal Pictures; Weinstein Company.

TORRES, Manuel

2015 La evolución del concepto de imaginarios sociales en la obra publicada de Juan Luis Pintos de Ceha Naharro. *Revista Imagonautas*, 6, 1-14.

TYLDUM, Morter (director)

2014 *The Imitation Game* [Película]. RU: Black Bear Pictures; Ampersand Pictures.

WOOD, David & GUDIÑO, Rosa

2017a Introducción al cine educativo [Archivo de video]. En *Usos didácticos del cine: introducción al análisis*. México DF: UNAM.

WOOD, David & GUDIÑO Rosa

2017b Antecedentes del cine educativo [Archivo de video, parte 1]. En *Usos didácticos del cine: introducción al análisis*. México DF: UNAM.

WOOD, David & GUDIÑO Rosa

2017c Antecedentes del cine educativo [Archivo de video, parte 2]. En *Usos didácticos del cine: introducción al análisis*. México DF: UNAM.

ZEMECKIS, Robert (director)

1997 *Contact* [Película]. EUA: Warner Bros.

Document receipt date: July 15, 2019

Document revision date: September 20, 2019

Document approval date: November 15, 2019

Document publication date: January 15, 2020



BEYOND THE TABLET, ¿AN INTERMEDIATE ZONE OF LEARNING?

Más allá de la *tablet*, ¿una zona intermedia de aprendizaje?

MARÍA ISABEL MIRANDA ORREGO*

Pontificia Universidad Católica del Ecuador, Quito

mmiranda523@puce.edu.ec

Orcid Code: <https://orcid.org/0000-0002-9882-2381>.

ISAAC DAVID GRIJALVA ALVEAR**

Pontificia Universidad Católica del Ecuador, Quito

igrijalva609@puce.edu.ec

Orcid Code: <https://orcid.org/0000-0001-5241-8976>

Abstract

This research seeks to go deeper into the study of child learning processes associated with the use of new technologies (*tablets*) in the classroom. Experimental and quasi-experimental studies at international level, from the past decade, analyze learning through the increase and repetition of content offered by the mobile device, omitting the experience of apprehending and learning processes that allow the appropriation of the knowledge by the students. So, this research asks: Does the *tablet* collaborate or break the act of apprehending? Is it possible to think about mediated learning by *tablet*? To address these questions, we proposed a qualitative research with a psychoanalytic theoretical framework in 6 public schools in Ecuador. The results have allowed us to identify the «playing», or gaming without rules, as it was proposed by Winnicott, as one of the central elements in the processes of apprehending or subjectivation of learning. Hence, children overflow the activity programmed by the software creating figures and shapes on the screen, exploring numerical possibilities that allow them to think beyond the activity proposed on the tablet. Also, we have identified that it is the teacher who facilitates the learning processes. The children come to her to show her the results, the children use the teacher's words and rhythms to solve the tasks requested by the tablet. We conclude that the educational link in the learning processes versus the use of technologies is significant, placing the teacher as mediator and the tablet as a possible intermediary.

Keywords

Childhood, play, knowledge, learning processes, technology, psychoanalysis.

Suggested form of citing: Miranda, María & Grijalva, Isaac (2020). Beyond the tablet, ¿an intermediate zone of learning? *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 177-198.

* Master in Psychological Sciences. Master in Anthropology. Degree in psychology. Research avenues: childhood, parentality, interculturality and new technologies. Full-time teacher of the Faculty of Psychology of the Pontifical Catholic University of Ecuador. Director of research projects on technology and education issues.

** Degree in Clinical Psychology. Research assistant in research projects on technology, education, clinical psychology, and community psychology.

Resumen

El presente trabajo profundiza el estudio de los procesos de aprendizaje del niño asociados a la utilización de nuevas tecnologías (*tablet*) en el aula. Estudios experimentales y cuasiexperimentales a nivel internacional de la última década analizan el aprendizaje como el aumento y repetición del contenido ofrecido en el dispositivo móvil, omitiendo la experiencia del aprehender o procesos de aprendizaje que permiten la apropiación de dicho conocimiento. Por esta razón se plantean las preguntas: ¿La *tablet* colabora o irrumpe el acto de aprehender? ¿Es pertinente considerar la *tablet* como mediadora de los procesos de aprendizaje? Para dar respuesta a estas interrogantes se propuso una investigación cualitativa con un marco teórico psicoanalítico en seis escuelas fiscales del Ecuador. Los resultados permiten identificar al *playing* (juegos sin regla), concepto propuesto por Winnicott como uno de los elementos centrales en los procesos del aprehender. De ahí que los niños sobrepasan la actividad programada por el *software* creando figuras y formas en la pantalla, y exploran posibilidades numéricas que les permiten pensar más allá de la actividad propuesta en la *tablet*. También, se ha identificado que es el docente quien facilita los procesos de aprendizaje: los niños acuden a él a mostrarle los resultados, usan sus palabras y ritmos para resolver las tareas que se les solicita a través del uso de la *tablet*. Se concluye que el vínculo educativo en los procesos de aprendizaje frente al uso de tecnologías es significativo, ubicando al docente como mediador y a la *tablet* como un posible intermediario.

Palabras clave

Niñez, juego, conocimiento, proceso de aprendizaje, tecnología, psicoanálisis.

178



Introduction

The interest in the study on the use of new technologies in relation to classroom learning arises from the request made by the Ministry of Education of Ecuador, which indicates the need to investigate the impact of new information technologies and Communication (ICT) in the child's learning. During the years 2017 and 2018, the Pro-Futuro¹ In these schools, the digital classroom program has been implemented since 2017 as part of the Pro-Futuro Program of the Telefónica Ecuador Foundation. Solution Project has been developed in a ministerial agreement with Fundación Telefónica Ecuador, which consists of the implementation of tablets² with learning software in public schools in Ecuador. From this, research on the uses and meanings of the tablet in school learning arises.³

In relation to international research on the effects of mobile devices on student learning, it is demonstrated that one of the great limitations of research has been to focus on measuring the learning variable as both achievement and increase of content learning. Additionally, the cognitive skills evaluated have been of a lower order, such as memory, attention, and perception, to the detriment of higher skills such as thinking, intelligence and language, related to the analysis and evaluation, training and hypothesis testing (Sung et al., 2016). Similarly, in Ecuador, through the Ministerial Project Use of Tablets in Classroom, the learning variable

was assessed through percentage indicators of letters, words, sounds, and numbers read correctly, score achieved in the exercise of dictation, sums, and subtractions correctly resolved, recognition of figures, among other indicators measured by the diagnostic tests of early reading (EGRA) and early mathematics (EGMA)⁴ (Ministry of Education, 2018) obtaining an impact on language of 0.24 and no impact on mathematics.

In both cases, learning is considered as a dimension that is apparently clear and susceptible to performance measurement, its primacy or preponderance not allowing other forms of expression of thinking beyond the repetition of content, which would be closer to the notion of knowledge (De Lajonquière, 1996). This means that the possibility of giving a place to the game and the error, vital elements when creating hypotheses, is lost; as well as language, a complex structure that implies more than repeating words or numbers.

This article seeks to explore what happens in learning, but not referred to learning processes as cognitive phenomena, but rather about the learning experiences that happen and unfold in the infant in relation to the teacher, and his classmates with the use of the tablet. To this end, we ask: How does learning appear in the classroom? Does the tablet collaborate or break the act of learning? Is it possible to think a tablet-mediated learning?

The approach towards the notion of learning is developed from a psychoanalytic perspective, which allows one to look at learning in a complex movement of apprehending, grasping or subjecting something of external reality (De Lajonquière, 1996; Piaget 1961). Winnicott (1971) locates this movement of grasping the external reality in a space of intermediate zones, spaces that appear between speaker and speaker. Therefore, questions about external reality (numbers, words, objects) circulate in this 'between', overlap and find or get lost between teacher and student, between students, between creating and repeating, between certainty and the mistake.

The child, as the subject of the unconscious, needs to articulate knowledge with that desire to grasp. The game of apprehending for the child is to look for 'something' that makes sense to him, appropriate what is offered, and be able to access the common code that is played in those contents. Subjecting the knowledge offered implies appropriating, incorporating, 'making body' a word, a rhythm, numbers that one can assimilate in your life (Piaget, 1961). The engine of learning starts from curiosity, questions, doubt, silence, error, joke and play. Hence the idea that only another human being can humanize the human being is evoked (Delion, 2018). In that sense, only one human being can teach another.



Acaso (2018) indicates that each person has different experiences in front of the school curriculum, in which rhythms, tastes, interpretations of the different contents are evidenced. These aspects have not been taken into account in international and national research on learning, leaving out the unconscious in education, the invisible.

Next, we review: first, the child's *play* in the act of apprehending; second, mediation in the apprehension: a place occupied by the teacher or the tablet? Finally, a section of conclusions in which the place of mediation and intermediary of the tablet in the classroom is discussed.

The stories and practices presented in this paper belong to children between the third and sixth year of EGB, and teachers who attend six public schools in the cities of Quito and Manta, in Ecuador. To protect the confidentiality of the participants, the names of the children have been changed. The methodological approach of this paper the participant observation method (ten classroom visits) and focus groups with children (six). This material was transcribed and, together with the field diary, categories were organized through open coding, such as: appropriation of the child at the time of learning (playing), mediation in the apprehension, the teacher or the tablet? and the place of error in teaching and learning. When analyzing them, the error category is placed as a sub-category of mediation in the apprehension. It is important to note that, although it is true that the theoretical framework comes from psychoanalysis and its object of study the unconscious, it is not the method of psychoanalysis (the cure, free association, etc.) that is used to generate the obtained information.

180



Playing: that useless game so often played by the child

When you enter a classroom of primary school children, the first thing that is obvious is the impression that children are very alive: we see them crawling on the floor between desks, shouting with joy because someone won some competition or pain because someone is crushing their fingers finger or choking them, spinning tops on the table or on the floor... there is no doubt that, they are alive and that life borders limits of pain, destructiveness, surprise, and curiosity (Field Diary, 2018).

The children described in this section wonder intensely about this external reality (numbers, words, objects, etc.) and try to grasp and apprehend "something" of it. Remember that it is impossible to fully grasp reality, therefore we symbolically cut parts of reality to live in it. For this

learning of external reality to take place, the child must strive and want to deploy an intermediate zone or third space (Winnicott, 1971), that is, an intermediate space located between him and the external reality, this space is an area of operation in which the child does not know what he will face and try to wrap himself with his own tools (motor, perceptual and symbolic) to be able to grasp some of that reality that is external to him. These acts and actions in order to grasp the external reality are what make it possible to point out that it is the intermediate zone that allows the subjectivation of the exterior and to convert this experience into learning. Since the characteristic of the intermediate zone is that it is free from the tension of linking internal reality with external reality (Winnicott, 1971).

The deployment of this intermediate zone is sustained mainly by the conscious and unconscious aspects of the child psyche (De Lajonquière, 1992). In the conscious dimension, Piaget (1961) calls them intelligent knowledge processes of reality, and in the aspect of the unconscious, Freud (1905) contemplates the presence of the desire supported in the epistemic drive.

The epistemic drive in the child links knowledge to desire, that is, he wishes to know, as well as knowing bringing him closer to his desire (Frigeiro and Diker, 2005). Its origin is conceived at the psychic level in the desire to see —scopic drive— as well as the desire to take over —domain drive— (Frigeiro and Diker, 2005). This desire to know compromises a symbolic inheritance given by the parents of the child, mainly offered by the mother, who presents the world to the child through her gaze, her voice, her meanings, everything propelled by his desire, and, in a second moment, will come a third party to contribute to the presentation of the law and the limits to the child. Thus, epistemic drive drives the child's questions and curiosity about reality.

Now, it is the desire of the epistemic drive that allows or inhibits the process of knowledge and apprehension of reality, that is, it is the unconscious movements associated with the question and curiosity that allow conscious knowledge. In that sense, the child, according to De Lajonquière (1996), does not know things, the child knows object relations, transmitted by other meanings and allowed (unconsciously) by others; hence objects have their own past and present. From this unconscious-conscious relationship, De Lajonquière (1996) explains that the child tries to reconstruct an imagined reality according to the facts that he can and is unconsciously allowed to perceive. Therefore, knowing implies being able to reconstruct imaginary relationships of objects, act on them



and signify them in their own subjectivity, according to their own desire and unconscious desires of parents, teachers, adults, others.

We will see these acts of apprehending reality through playing, a concept coined by Winnicott (1971), referring to the act of free association of play without rules that children manifest. This psychoanalyst uses the richness of the English language to differentiate the concept of *playing* from *game*, the first referred to the act of playing and the second understood as a regulated game.

Winnicott (1971) proposes playing as an indispensable activity for the formation of the self, whether in children or adults. In the adult, this *play* appears in the puns or jokes.

It is important to clarify that, although it is true, the playing concept arises from the spontaneous game in the therapeutic space of a psychoanalyst determined by the psychic structuring of the speaker and the therapist's technique, it is considered appropriate to use this concept in the classroom, posing inequivalent differences that the classroom space has compared to the therapeutic space. As it will be exposed, sounds produced by the children are observed in the classroom such as hitting the table with rhythm, humming songs, whistling, dancing, while the class takes place; drawings and the confection of origami and paper figures also take place. This type of playing in the classroom is probably invisible to the teacher's gaze and unusable as long as it does not manifest, apparently, a determined or expected end within a formal conception of education.

These playing moments try to subjectivize some aspect reality, they are the moments where the child escapes from the content officially given at the time of class, escapes to his stories and creations; therefore, it displays a potential space of creativity or intermediate zone in which it seeks and creates objects, advances in its own imaginary re-creation of external reality (De Lajonquière, 1992), moving away from a linear and cartesian thought (Yáñez, 2016).

These spaces displayed by the child, simultaneously with other children, can be superimposed and thus sharing a common experience such as learning. Winnicott (1971) is emphatic in pointing out that this play that does not have an explicit purpose "naturally leads to cultural experience, and really constitutes its basis" (p. 142).

Next, subcategories of game analysis observed in the classroom before and during the use of the tablet are described.



Analysis 1: playing with rhythms, shapes and movements

Observation 1.1. At the start with the use of tablets, Diana and Carolina, pass their finger pressing the screen, just where the digital date and time appear on the home screen, pass their finger over and over those numbers, drag the index finger on small circles and lines, they insist on this movement, they discover that under those numbers one can see words, they insist wanting to decipher these letters, then two overlapping levels of content appear, two different screen colors, as if they were two different layers, they insist looking for something, a texture? They play a sort of veiled and manifest transparency of what the screen shows and hides. The game ends when the screen is unlocked (4th EGB, Manta, 2018).

Observation 1.2. In one of the activities proposed by the tablet, children can write on the screen using the finger, the finger stroke becomes the lines of a word, depending on the button chosen with the same finger they can erase or use other colors and thicknesses. They write the words with only one finger, keeping the other fingers and hand in suspense as if nothing else could touch the screen more than the index finger. They do it carefully, neatly, silently holding their breaths to avoid mistakes. Children say it is one of the activities they like the most (4th EGB, Manta, 2018).

Observation 1.3. Several students make folds in some sheets of paper hidden under their desk (in a dark space that does not reach the ground or the sky), which is between those places, and that allows them to continue attending the language class while folding planes, flowers, and ninja blades that, as a sample of their ability, are exchanged at the end of class, something like if their product, as if their class result, was not only to repeat what the teacher tells them to repeat but to say or show that they could create artifacts to play at the next hour (3rd EGB, Manta, 2018).

Observation 1.4. José asks Daniela: how did you make the headphones in your drawing? Daniela responds you have to draw around the head just like when you make a rainbow and you will get the headphones. José asks ¿And for drawing someone sitting? Daniela tells him that to draw someone's legs in profile she draws a single leg at a right angle (focal group, 5th EGB, Quito, 2018).

Observation 1.5. While the teacher explains what the omnivores, herbivores, insectivores, and carnivores mean, at least two children touch with their fingers small jelly cups under the desk, squeeze them, stretch them, take them out of the glass and put them back. Another girl checks, looking at her teacher, a box with beads inside the desk, counts and orders them. Another child spins a 25-cent coin on the desk and looks



closely at its trajectory until it stops moving or falls to the ground (3rd EGB, Quito, 2018).

Observation 1.6. The teacher delivers words written on cards; children have to identify their accent classification. A child takes a cardboard piece with the word inscribed: he reads it, he takes it with his thumb and forefinger in half and then he starts beating it in the air as if he was going to fly. He looks closely at the movement generated by the undulation of the cardboard. He tells the other children that he is flying, he poses it on the edge of his partner's chair sitting in front of him, moves it abruptly, and then delicately watches the movement produced with arrest. He waves it hard and brings it close to his ear as if he wanted to listen closely to the noise emitted by its movement. He looks at the cardboard as if he was telling a story, bring the piece to the window and stares at the sky, as if the word-bird had gone with him outside the class. Then it was his turn to quickly paste the word on the board when, he returned to his seat, he looked at the window again, as if looking at that word for the last time - a bird that came out with a part of it (5th EGB, Quito, 2018).

184



These vignettes illustrate the questions children ask in relation to movements, shapes, construction of figures and textures. This leads us to think about the place of the physical experimentation of reality, palpable and felt which the apprehension implies, and with it the importance of the use of the senses. Tisseron (2013a) emphasizes that before the child can play with virtual cubes, the child must go through the experience of playing with tangible cubes in material reality, otherwise, he will not know how to play with them.

Thus, knowledge becomes body in the child. The child traces and writes in a particular way moves a paper with a flying rhythm. In this way, the child not only apprehends a cognitive notion from the outside, but that act of subjectivation of the external reality becomes movement and gesture in it. Rodulfo (2016) states the relevance of the rhythm, the sequence, the pauses of the objects presented to the child, in explaining how the body is constructed from the rhythm:

We are made of motives of incessant process of variation, repetition, transformation; in turn, we are polyphonic, us a single incessant melody does not make, no matter how many we can recognize in our existence, we sound on several simultaneous planes, more or less unconscious, more or less conscious; we recognize ourselves or we can be recognized in certain rhythmic, harmonic, melodic singular traits, that are quite specific and never identical to those of other neighboring subjectivities; this network of motives crosses our word, our games, our motor skills,

in short: the motive does not circumscribe one of these territories and means of subjective writing; our affectivity, therefore, is woven with a whole range of rhythms, velocities, accents, intensities, tones, sound and silent atmospheres (p. 99).

The child creates movement with a paper, escapes from the class in the imagined flight of a bird-word, the child escapes to an invisible dimension. Cobo and Moravec (2011) raise the relevance of ‘invisible learning’ in the face of the use of technologies, in which the child learns in a self-taught way, gathering information seen and clipped from others outside formal learning, that is, creating when nobody sees it. Now, one can criticize Cobo and Moravec (2011) in their notion of invisible learning because it does not mention the importance of the repetition of content and rules. That is, the child runs away because there is a place from which to escape, a repetition that allows creating a space produced on the margins of a formal school class. Winnicott (1971), in that sense, raises the importance of the game or regulated play as a complement to *playing*. Compont (2018) adds that this relationship is not antagonistic and even the first is a condition of the second, so the *game* allows playing and *playing* consolidates the apprehension of something.

In this sense, playing consolidates learning to the extent that it produces curvature movements that distort external reality (Rodulfo, 2016), this invites to overcome the notion of learning associated with the ‘Gaussian curve’, flat and linear versus a mobile and asymmetric curvature of learning.

It is not only the elaboration that the child creates but the encounter with the possibility that something of sound, of the unforeseen and of the outside of the class, will surprise him while he seeks to pay attention to the words that the teacher exposes and proposes; thus also creativity is involved in what his hands form and deform. How they play in their twenty-centimeter hiding place, a place of their own, a cave hidden in the desk, perhaps a cavern in which, unlike Plato’s cave (1978), they need to enter to explore the transcendence and that there is something more behind those shadows and reflections explicitly indicated in class.

Analysis 2: playing with numbers and infinity

Observation 2.1. Olga says that what she likes best to use on the tablet is the calculator because she can do additions. Leo adds to this comment that as soon as he began to know the tablet, he also got into the calculator to know if the number two hundred plus forty thousand existed (focus group, 5th EGB, Quito, 2018).



Observation 2.2. Natalia indicates from a drawing, that you can reach the sky, and since the numbers are infinite, she says that with the numbers you can go as far as you want. Researcher: how is it to reach infinity? Juan says: playing, until one is wrong. (focus group, 3rd EGB, Manta, 2018).

These vignettes illustrate questions about an exploration of the physical field that children do. They ask about numbers and infinity, evoking in both concepts dimensions of the eternal. Children mention the use of the tablet as a means of access to what is referred to as infinity and the extensibility that is not reachable by the human mind. This is one of the first meeting points of the man-machine relationship in which, through the calculations and sums of numbers, something impossible is achieved.

Learning notions around mathematics becomes a game of adding impossible figures. This children's exercise of adding sums uncovered in the classroom allows them to think about relationships of numerical objects that are repeated to infinity. Here questions about the impossible can be revealed, that which escapes the humanly possible record.

186



Analysis 3: playing on own explanations and jokes

Observation 3.1. The teacher asks, what do dogs eat? the child answers: my mom prepares bone broth. Teacher: and what fish do eat? Child: lettuce and tomato salad. I have a question: how do fish drown in the sea? (3rd EGB, Manta, 2018).

Observation 3.2. The teacher explains to the children: what do we call animals that eat plants? Those who eat meat, we will call carnivores, those who eat insects, insectivorous, and those who eat grass? A child responds: vegetarians (the whole course laughs). The teacher explains: there are animals that eat everything, such as the pig, if they give it grass, the pig eat grass if they give it waste, it eats waste, how do we call that animal? A child answers: glutton (3rd EGB, Quito, 2018).

The vignettes illustrate how children seek to share their own interpretations and apprehended meanings with their classmates and their teacher, about their ideas about feeding animals and how this laughter shared by the class becomes a social bond. They share their own subjectivities with the idea of weaving an experience shared with others. The presence of the joke allows the superposition of intermediate zones played between all. By way of censorship, an unusual explanation allows a common and agreed response, that is, a shared experience.

It also allows us to remember, as Freud (1906/1992) elaborates in his work *The joke and its relation to the unconscious*, to the joke as a social process, as well as the difference that inhabits between the comic and the joke regarding the need for the joke to be told to another:

We cannot in the first instance guess what the basis may be of this urge to communicate the joke. But we can see another peculiarity in jokes which distinguishes them from the comic. If I come across something comic, I myself can laugh heartily at it, though it is true that I am also pleased if I can make someone else laugh by telling it to him. But I myself cannot laugh at a joke that has occurred to me, that I have made, in spite of the unmistakable enjoyment that the joke gives me. It is possible that my need to communicate the joke to someone else is in some way connected with the laughter produced by it, which is denied to me but is manifest in the other person. (p. 37)

Mediation in the apprehension: The teacher or the tablet?

So far, we have described how the child spontaneously displays *playing* with or without a tablet inside the classroom. Now, playing becomes indispensable for apprehension, insofar as it was shown that subjective constructions of reality are present. So far, the figure of the teacher external to play has been evoked, however, it is the teacher who empowers and transmits a form of relationship with the external, therefore he allows or inhibits play. This section seeks to highlight in detail the modes of transmission that the teacher proposes to the child about the learning with technologies, furthermore, the use and place that the teacher gives the tablet during the class was carefully analyzed. Next, three subcategories of analysis are described, referring to: the tablet and the living, the place of knowledge in the exercise of the teacher and the teacher as a figure that can express more about the error than the tablet.

Analysis 1: the teacher relates to the tablet as if in it inhabited some living thing.

Observation 1.1. The teacher uses a microphone to give the class, at the time of using the tablet, she tells the children to prepare to use at the same time, for this, she counts up to three and at the end of her instruction she places the microphone in the audio of the tablet, she passes the microphone from her mouth to the 'mouth' of the tablet, as if creating a continuum of her voice with the voice of the tablet, the sound is amplified throughout the class, as if it were the extension of the teacher's voice. After the instruction of the tablet ends, the teacher directs the microphone towards her own voice (3rd EGB, Manta, 2018).



Observation 1.2. A teacher, at the time of distributing the tablet to the children, points out that they should leave the tablet face down on the desk because she is asleep, is resting, and that when everyone has the tablets, they can wake her up. Some children bend their arms on the table and rest their heads to the side as if they also slept next to the tablet (3rd EGB, Quito, 2018).

In both situations, the tablet is given certain living attributes, as Burckhardt and Höfer (2017) place it in the notion of animism of the digital as transparency or “reciprocal and total penetration of the digital space and of physical space” (p. 119).

What we have seen in the vignettes is a certain example of this, either by extension of a human function such as speaking or attribution of a biological function such as sleeping and waking. In the first case, the tablet becomes the extension of the teacher’s voice, who finishes the instruction and gives rise to ‘the voice’ of the tablet. In this gesture of extension of the voice through the microphone, it would seem that the teacher gave the tablet the power to speak and, with it, the explanation of some content of the subject. This is a second moment where a boundary is blurred between the function of the machine and the function of the human, can the machines speak? Can the machines teach? Speaking is an exclusively human faculty, the exercise of speaking does not have to do with the ability to repeat sounds or display information, it has to do with the ability to create, create with *lapsus* and that in that *lapsus* may be surprising in their the polysemic richness that the use of language and word allow. The word shapes the experiences that the child lives signifying experiences and relationships with objects. The words are given by others and built by the child, so we can understand, for example, when a mother counts the times she has insisted for the child to repeat the word ‘noodle’ in front of that plate of food until finally, the child ends for saying ‘I want spaghetti’ and the mother says ‘nobody taught her that word’. Why did she choose that word? Because precisely speaking is choosing, there is a decision to say in a certain way and not in another, a condition that allows subjectivity, so speaking is a humanizing act.

This vignette about the place of speaking allows us to indicate a first function that distinguishes the teacher’s voice from the machine, it cannot speak even though it has ‘voice’, or rather a sequence of phonemes, programmed to be repeated packaged free *lapsus*, it has not surprise nor variation with regards to another, a fundamental condition for the educational link and teaching. The educational bond is one of the forms of the social bond, which propels the particular, and that cannot be sustained



without transferring it to another, and the transmission of a desire to be able to sustain that space in the classroom (Tizio, 2003). Learning depends on the desire of the teacher who wants to transmit knowledge that does not belong to him, that is, the teacher can “transmit the legacy of generations, the symbolic heritage so that the subject finds his place there” (Tizio, 2003, p. 175). The teacher provides the child the space to find answers, and his way to the social and cultural (Frigeiro and Diker, 2005).

In the second vignette the teacher brings forth the idea of a tablet that sleeps and rests, which causes some children to sleep next to the tablet, do they imitate it? This is a gesture made by children in which the sleeping of the machine extends to the sleep of the human, and that only the teacher can authorize the awakening of the machine and the human. This is a second moment of animic extension of tablet to the human. Why insist on animating the inanimate? Perhaps as a way of solving the fear of the strange, that other stage, the stage of the unconscious (Freud, 1919/1992), can also be an invitation of the child to establish a close relationship with the object.



Analysis 2: Who knows more, the tablet or the teacher?

Observation 2.1. The teacher tells the children: do not despair if today you could not use the tablet, you are children and know a lot about technology, sometimes even more than the teacher (3rd EGB, Quito, 2018).

Observation 2.2. All the children work on the tablets, during the class they were moving, laughing making noise. Now they are silent, without moving, working as groups, pairs or alone, on foot or sitting, all looking at the tablet. The teacher is no longer in front of them as he did during the first moment of the class, he stands aside, backs off, steps back from the place he occupied, approaches me and says: there is where we are going, to children learning like this, and they needing the teacher less and less (5th EGB, Quito, 2018).

Observation 2.3. I ask the children of the focus group, and if they have doubts about how to use the tablet if they ask the classmate or the teacher? in a chorus all the children respond strongly saying: to the teacher! they looked at me as if challenging me for having asked this question. I ask them, do you always ask the teacher? Juan: Yes, because children don't know about some things. José adds: yes, but that's why we are in school, to learn. Daniela says: but we know more about technology... my grandmother says that children know more about technology than about studies (focus group, 5th EGB, Quito, 2018).

Observation 2.4. Andrés is a gamer, he is recognized by his groupmates and is defined as such because he plays online every day in a game called Free Fire, despite not having access to the internet at home, he uses the work internet of his mother, knows the score of each of his classmates. While it is true, he does not have good grades, children with good performance in the classroom respect him as an authority in virtual games. I ask him about the difference between using a tablet in the classroom and at home... where do you learn more? thinking that the tablet in the classroom would bore him for the lack of interactivity like in online games and maybe he would tell me that he learns more at home, he answers me: the video game is for playing and the tablet in the classroom is for learning, in one you play in another you learn (6th EGB, Manta, 2018).

These examples show how children specify the place of learning, different from that of virtual games. On the one hand, this idea appears that the knowledge of technology is not synonymous with the knowledge of formal or curricular studies. Also, this knowledge of studies and learning is found in school and in the teacher. It is striking how children are emphatic in indicating that the teacher is the one who knows. When the researcher has proposed that others —different from the teacher— can contribute knowledge, such as classmates, children get angry as if this proposal touches something serious, such as a prohibited action, as serious as a taboo.

These children's signals about technology and knowledge are not so clear for teachers. In one of the vignettes, the teacher doubts his teaching place in the face of new technologies and thus evokes the tablet as another possible teaching figure. The debate between knowledge and wisdom proposed by De Lajonquière (1996) allows us to shed light on this since knowledge is in the order of information and the ability to associate what has been produced, while wisdom will have to do with the unconscious desire, that is, a record that the speaker does not know he knows, that is being played out and producing an effect on the possibility of the emergence of knowledge (De Lajonquière, 1996).

It is clear that Internet access allows the child to have an unlimited amount of knowledge and information, that is, the tablet can be an object that collects large amounts of information; however, the accumulation of information is not comparable to the transmission of knowledge and wisdom.

Observation 2.5. In the class developed by the teacher, before starting with the use of the tablet, he carried out an exercise of separation of syllables with applause, so the children played with the rhythm of the hands and their voice. At the moment when the children had to identify the accent of words in the tablet, several children begin to applaud and



rhythm the accent of the words with their own voice. I point out to the teacher that children move their hands separating the syllables as they learned with him (5th EGB, Quito, 2018).

In the gesture of clapping and using the voice to sing the syllabic cuts in the words, as they learned with the teacher, the children evoke the educational bond (Tizio, 2003). At the end of class, in the observed courses, a large number of children approach the teacher to show that they have finished their activity. That is to say, there is a permanent search of the gaze, of an answer on the part of the teacher.

This link established between the child and the teacher surpasses the tablet, it supports or not the learning process, but does not replace him. The strength of the bond between the child and the teacher is observed in the pact created between the two, this pact speaks of the trust of one towards the other.

As a researcher, I could not understand how children repeated the classification of animals (herbivores, insectivores, omnivores, carnivores) and words (accents). I constantly asked myself, what is the use of knowing that if one later forgets? or why are the teacher's questions designed to be answered as a Gregorian choir? For an adult this could be considered a nuisance, in these answers, there is a group voice that responds the same. I wondered why children accept this? (Field diary, 2018).

The children navigate those fluids full of content, some viscous, strangers and foreigners, trusting that it is a path drawn by someone who is sometimes interested in them being able to learn. This relationship towards formal learning also implies a type of relationship with classmates, a group similar to a Gregorian choir is set up, which repeats short sentences or words that complete the sentence indicated by the teacher. When one of the children exposes some extensive personal response, he receives censorship from his peers, who refer him to the choir. We see how, perhaps, even the child's individuality is subject to the group of children when facing an adult. However, as proposed in the first section, playing allows placing something of the child's private world, which gives him relief in the encounter-or not of being in the group.

Analysis 3: the teacher, a human who can evaluate and say something else about mistakes

Observation 3. 1. Mariela points out that at home she is nervous about playing videogames, she says: I get nervous because I think I'm going to die at any moment. I point out that they are not going to die on the



tablet, do they still get nervous? Mariela says yes, she says: I get nervous because you are working and you don't know if are going to get a four, a six or a five. José adds: while I was doing the spelling exercise, I became super nervous, it is the same as an exam, only that it is playing like that and not on a sheet... I get nervous like I'm going to get a bad grade (focus group, 5th EGB, Quito, 2018).

Children who use technologies are usually invaded by sensory stimulation that they cannot process alone (Tisseron, 2013a), hence the importance of having an adult that allows them to say something of their experience to build a narrative plot, otherwise the Child accumulates sensations without a purpose, which can potentially produce psychic discomfort (anxiety, omission of oneself), as well as stereotyped uses of the tablet (Tisseron, 2013a). Children say they get nervous, remembering how they die as avatars in video games. This sensory invasion means that there is a constant tension in the emotional field that adds to the tension of the grades obtained at the end of the activity on the tablet.

In all the observed classes, the children were waiting to get the correct answer to get a ten at the end of the activity.

Every time they had a correct answer, they applauded, shouted, and said the right answer loudly. In a sixth-grade course, students wrote the answers on a small sheet that circulated throughout the class (Field Journal, 2018).

This situation allows us to look at the place of evaluation and learning mistakes. Evaluation is one of the moments where what the child has learned or not materializes. And this becomes instances of great tension and discomfort, both for children and for the teacher. Many teachers point out that evaluation is what takes time away from teaching; Likewise, some “teachers ask in the training sessions, if the tablet helps them with the automatic evaluation thinking of this procedure as a relief (Field Journal, 2018). That is, the evaluation of the tablet software supplements that of the teacher, which makes it possible to ask the question: what type of evaluation the tablet cannot perform? For example, the tablet cannot realize that a morning someone had a family problem and is in an irremediable unease which makes an evaluation meaningless. Perhaps the evaluation makes more sense when you understand the games that make up that apprehension, more than grades that do not account for that student's true condition and situation.

Under the evaluation is the place of error and, in the case of children and teachers, the terror of error. The concept of error has mutated



towards the search for a culprit, on the one hand, it is considered that it shows the teacher's bad practice and in the case of the child the error has become a bad precedent at the level of mental development, 'the son to hide', something shameful and has ceased to be for exploring, as a place of inflection, of possibility, of potentiality (De Lajonquière, 1996; Trawny, 2016). It is precisely the error that makes us human, humanizes us, expressed that we live in a process of marches and counter-marches of apprehension. The tablet does not know how to return an error, it does not understand the logic of the error, it cannot evaluate processes, because it lacks what it implies to be affected by the other; in terms of Flores and Porta (2019): it cannot offer the other an ethic of hospitality and recognize him as 'other' (Joaqui and Ortiz, 2017). Hence the relevance of asking ourselves about who is the one who mediates the experiences of apprehension in the child inside the classroom, although the teacher himself doubts about this, the answer is the teacher. Freud already mentions it, "it is human beings who can only turn another a human being" (Delion, 2018, p. 22). From the above, the teacher is recognized as this great mediator of the apprehension experience, since only by sharing about the experience can it be elaborated (Tisseron, 2013a).



Conclusions

The text analyzes the question for the apprehension and the tension with the introduction of new technologies in the classroom. In this way, the questions that circulate around the tablet's entry are: Children apprehend with tablets? What do they learn? What is the place that teachers occupy in this relationship? And finally: Is it relevant to consider the tablet as a mediator of learning processes?

Accordingly, there has been talks about the relevance of the dimension of the invisible in learning. Children display a unique game during class with and without the use of the tablet, understood as playing (Winnicott, 1971) that allows articulating the formal content delivered by the teacher with the child's own ways of understanding external reality. The article highlights this body and rhythmic game proposed by children in class as a vital moment for the consolidation of learning within the classroom. Thus, the repetition of formal content and traditional pedagogy (Aguilar, 2019) could become the edge that supports the deployment of an intermediate learning zone of the child.



The article also explores and proposes the place of the educational link between the teacher and the child as a central element in tablet-mediated learning. In that sense, the relevance of voice, speech, error, and desire for transmission that can only be delivered by the teacher, immersed and entertained in a culture and history is underlined. At this point it is relevant to mention that the tablet is located in a place of intermediary and not, for the moment, of mediation (Latour, 2001) of learning. This notion of intermediary and mediation of Latour is taken to point out the difference in relationship that children and teachers establish with the tablet in the question of learning, these categories are chosen despite the fact that Latour does not adhere to the idea of a subject differentiated from objects and even less a produced speaker and producer of the unconscious. The intermediary dimension refers to the idea that the actor or actant of the network, in this case, tablet, is defined in a function proposed and agreed by the educational group, which compresses it to an entry and exit system, but not in the ability to affect and transform others, a central feature of mediation networks. Thus, the use of the tablet in the slogan of this project implemented in public schools is limited to a moment of the class, intended to reinforce certain content offered by the teacher; It also allows the circulation of questions among children ultimately referred to the knowledge of the teacher. It is with the teacher that the children use the tablet, they applaud as he did, they show him the results of the activity, they wait for his voice to move forward or backward. The teacher is the great mediator of learning and the tablet is an intermediary.

Thus, the teacher as a transforming actant begins to libidinize, present and invest in meaning the classroom space, this along with the entry of the tablet as a new resource or intermediary tool in the commitment to learning. What can become in the first step for the tablet to become appropriate in use that responds to the educational context (Dillenbourg et al., 2013) and potentially become a mediator in the sense of Latour.

Now, wondering about the entry of “new” objects as mediators in learning is of vital importance, since ministerial logics always point to educational innovation through the entry of new objects. At one time were electronic boards, computers, tablets, perhaps in the future an android, at the expense of the central element of learning: the educational link.

We are not condemning the entry of technological objects. It has been seen how the tablet begins to be located in the middle of the relations of the classmates, in the middle of the relationship between teacher and student, that is, it begins to appear as a propellant to create a social pseudo-link, with a pseudo-speaker, that could begin to occupy an inter-

mediate place, potentially creative, that allows looking for certain meaning (Winnicott, 1971). However, it cannot become an object that dictates the truth or meaning of life; in that sense, this could generate a stagnation in psychic production, in which one apparatus dictates a truth and the other is condemned to receive it without any meaning conveyed in it.

Support and acknowledgments

This is a project that received financial support from both Fundación Telefónica Ecuador, as well as from the Pontifical Catholic University of Ecuador (PUCE). Thanks to Fundación Telefónica and its Pro-Futuro Project team and to the Ministry of Education of Ecuador. Finally, recognition is extended to the PUCE research team of the Fundación Telefónica Digital Classrooms Project, consisting of: Balladares Burgos Jorge, Cruz Silva Jorge, Egas Reyes Verónica, Loza Aguirre Edison, Maldonado Garcés Verónica, Miranda Orrego María Isabel (directora), Rivas Toledo Alexis, Roa Marín Henry y Salao Sterckx Emilio. Los estudiantes, Grijalva Alvear Isaac, León Bayas Cristina, Terán Paz y Miño Daniela, Rivadeneira Yépez Ana Dominique.

195



Notes

- 1 In these schools, the digital classroom program has been implemented since 2017 as part of the Pro-Futuro Program of the Telefónica Ecuador Foundation.
- 2 Tablet is a word from English, translated into Spanish as 'tablet'. According to the RAE, it is defined as a portable electronic device with a touch screen and with multiple features.
- 3 Research from the Catholic University of Ecuador entitled *Studies on the uses and meanings of digital classrooms in relation to childhood school learning in Ecuador*.
- 4 EGRA (Early Grade Readyness Assesment): test that measures basic literacy skills. EGMA (Early Grade Readyness Assesment): test that measures basic skills for calculation and mathematics.

Bibliography

ACASO, María

2018 *Pedagogías invisibles: el espacio del aula como discurso*. Madrid: Catarata.

AGUILAR, Floralba

2019 Enfoques y perspectivas latinoamericanas. En F. Aguilar (coord.), *Enfoques y perspectivas del pensamiento pedagógico latinoamericano* (pp. 79-119). Quito: Abya-Yala.



- BURCKHARDT, Martin & HÖFER, Dirk
2017 *Todo y nada: un pandemonio de la destrucción digital del mundo*. Barcelona, España: Herder.
- COBO, Cristóbal & MORAVEC, John
2011 *Aprendizaje invisible: hacia una nueva ecología de la educación*. Barcelona: Transmedia XXI.
- COMPONT, Hélène
2018 Un groupe à médiation avec des enfants... en période de latence "Motricité et création d'histoires". *Revue de Psychothérapie Psychanalytique de Groupe*, 70, 167-178. doi.org/10.3917/rppg.070.0167
- DE LAJONQUIÈRE, Leandro
1996 *De Piaget a Freud: para repensar los aprendizajes. La psicología entre el conocimiento y el saber*. Buenos Aires: Nueva Visión.
- DELION, Pierre
2018 *Fonction Phorique, holding et institution*. Francia: Érès.
- DILLENBOURG, Pierre, DIMITRIADIS, Yannis, ROSCHELLE, Jeremy & HOPE, Hulrich
2013 Design for classroom orchestration. *Computers & Education*, 94, 485-493. doi.org/10.1016/j.compedu.2012.10.026
- FLORES, Graciela & PORTA, Luis
2019 Compromiso existencia con la enseñanza. *Sophia, Colección de Filosofía de la Educación*, 27, 289-309. doi.org/10.17163/soph.n27.2019.10
- FREUD, Sigmund
1919/1992 *Lo ominoso* (Tomo XVI). Buenos Aires: Amorrortu.
1906/1992 *El chiste y su relación con el inconsciente* (Tomo VIII). Buenos Aires: Amorrortu.
- FRIGEIRO, Graciela & DIKER, Gabriela
2005 *Educación: ese acto político*. Buenos Aires: Del Estante.
- JOAQUÍ, Darwin & ORTIZ, Doris
2017 Educación como práctica social: la cuestión del otro como y su reconocimiento. *Sophia: Colección de Filosofía de la Educación*, 23(2), 195-218. doi.org/10.17163/soph.n23.2017.07
- LATOUR, Bruno
2001 *La esperanza de pandora: ensayos sobre la realidad de los estudios de la ciencia*. Barcelona: Gedisa.
- MINISTERIO DE EDUCACIÓN DEL ECUADOR
2018 *Evaluación del programa de entrega de laptops y tablets*. Recuperado de <https://bit.ly/352R9Dn/>
- PLATÓN
1979 *La república*. Lima: Edición Universo.
- PIAGET, Jean
1961 *La formación del símbolo en el niño*. México DF: FCE.
- RODULFO, Ricardo
2017 *Ensayos sobre el amor en tiempos digitales: dominios sin dueño*. Buenos Aires: Paidós.
2016 *Curvaturas: ensayos psicoanalíticos*. Buenos Aires: Lugar.
- SALAO, Emilio
2018 *Informe sobre el caso Pro-Futuro en la mediación de la inequidad en escuelas públicas de Morona Santiago*. s/e.

- SUNG, Yao-Ting, CHANG, Kuo-En & LIU, Tzu-Chien
2016 The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, 94, 252-275. doi.org/10.1016/compedu.2015.11.008
- TISSERON, Serge
2013a *Grandir avec les écrans: La règle 3-6-9-12*. Bruselas: Yapaka.
2013b Étude préliminaire de validation d'un questionnaire évaluant le type d'interaction dans les jeux vidéo (QTIJV). *Neuropsychiatrie de L'enfance et de L'adolescence*, 61, 81-92. doi.org/10.1016/j.neurenf.2012.11.006
- TISSERON, Serge, TORDO, Frédéric & BADDOURA, Ritta
2014 Testing Empathy with Robots: a model in four dimensions and sixteen items. *International Journal of Social Robotics*, 7, 97-102. doi.org/10.1007/s12369-014-0268-5
- TISSERON, Serge, MISSIONER, Sylvain & STORA, Michael
2012 *Les enfant au risque du virtuel*. Francia: Dunod.
- TIZIO, Hebe
2003 *Reinventar el vínculo educativo: aportaciones de la pedagogía social y del psicoanálisis*. Barcelona: Gedisa.
- TRAWNY, Peter
2016 *La fuga del error: la an-arquía de Heidegger*. Barcelona: Herder.
- WINNICOTT, Donald
1971 *Juego y realidad*. España: Gedisa.
- YÁÑEZ, Jaime
2016 Pensamiento complejo abstracto en el aula. *Sophia: Colección de Filosofía de la Educación*, 21(2), 121-141. doi.org/10.17163/soph.n21.2016.05



Document receipt date: June 28, 2019
Document revision date: August 20, 2019
Document approval date: October 15, 2019
Document publication date: January 15, 2020

POTENTIAL FOR INNOVATION AND INSTITUTIONAL MANAGEMENT AT THE NATIONAL UNIVERSITY OF CAÑETE-PERU

Potencial de innovación y gestión institucional en la Universidad Nacional de Cañete-Perú

*DULIO OSEDA GAGO**

Universidad Nacional de Cañete, Lima, Perú

dosed@undc.edu.pe

Orcid Code: <https://orcid.org/0000-0002-3136-6094>

*RUTH KATHERINE MENDIVEL GERONIMO***

Universidad Nacional de Cañete, Lima, Perú

rmendivel@undc.edu.pe

Orcid Code: <https://orcid.org/0000-0002-3147-2655>

*AMANDA DURÁN CARHUAMACA****

Universidad Nacional de Cañete, Lima, Perú

aduran@undc.edu.pe

Orcid Code: <https://orcid.org/0000-0001-8183-589>

Suggested form of citing: Oseda, Dulio, Mendivel, Ruth & Durán, Amanda (2020). Potential for innovation and institutional management at the National University of Cañete-Peru. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 199-226.

* Bachelor of Education and Systems and Computing Engineer, Master of Education, Doctor of Education Sciences, Doctor of Educational Psychology and Tutorial, Doctor of Systems Engineering and Ph.D. in Business Administration (USA). He is a professor at the National University of Cañete, director of the Professional School of Systems Engineering, international lecturer of the OIICE and researcher RENACYT-CONCYTEC.

** Bachelor of Education, Master in Education Administration, Doctor of Education. She is an A1 professor at the National University of Cañete and an international lecturer at the OIICE.

*** Systems Engineer, Master in Computer Science and a Ph.D. candidate in Systems Engineering. She is an associate professor at the National University of Cañete and a project consultant in IT/SI.

Abstract

This research part of the framework of the multiple and complex political, economic, social and cultural transformations posed by the current university system, arises from the need to develop accurate diagnoses of the innovative potential that public universities need in the country, to be at the avant-garde of private universities in the context of the requirements of the National Superintendence of Higher University Education (SUNEDU) and the National System for the Accreditation and Certification of Educational Quality (SINEACE). The objective of the research was to determine the degree of relationship that exists between the potential for innovation and institutional management in the management, teaching and administrative staff of the National University of Cañete. The research was applied type, correlational level, we worked with a transversal correlational design. The population was made up of 154 subjects among managers, teachers and administrators, and the sample was probabilistic and stratified consisting of 92 subjects. The level of potential for innovation that the university has is 75%, being qualitatively good, and in institutional management 73%, being very good, in the perception of the subjects evaluated. It is concluded based on the three dimensions and with a level of significance of 5%, that there is a direct and highly significant correlation ($\rho = 0.902$ and $p\text{-value}: 0.000 < 0.010$) between the innovation potential and the institutional management in the management, teaching and administrative staff of the National University of Cañete.

Keywords

Innovation, actor, capacity, educational management.

Resumen

La presente investigación parte del marco de las múltiples y complejas transformaciones políticas, económicas, sociales y culturales que plantea el sistema universitario actual, surge de la necesidad de desarrollar diagnósticos certeros del potencial innovador que necesitan las universidades públicas en el país, para estar a la vanguardia de las universidades privadas en el contexto de las exigencias de la Superintendencia Nacional de Educación Superior Universitaria (SUNEDU) y el Sistema Nacional de Evaluación Acreditación y Certificación de la Calidad Educativa (SINEACE). La investigación tuvo como objetivo determinar el grado de relación que existe entre el potencial de innovación y la gestión institucional en el personal directivo, docente y administrativo de la Universidad Nacional de Cañete. La investigación fue de tipo aplicada, nivel correlacional, se trabajó con un diseño correlacional transversal. La población estuvo conformada por 154 sujetos entre directivos, docentes y administrativos, y la muestra fue probabilística y estratificada conformada por 92 sujetos. El nivel de potencial de innovación con que cuenta la universidad es del 75%, siendo cualitativamente bueno, y en la gestión institucional el 73%, siendo este muy bueno, en la percepción de los sujetos evaluados. Se concluye en base a las tres dimensiones y con un nivel de significancia del 5%, que existe una correlación directa y altamente significativa ($\rho = 0,902$ y $p\text{-valor}: 0,000 < 0,010$) entre el potencial de innovación y la gestión institucional en el personal directivo, docente y administrativo de la Universidad Nacional de Cañete.

Palabras clave

Innovación, actor, capacidad, gestión educativa.



Introduction

The characteristics and conditions of today's world require educational institutions to design more efficient projects to face the challenges of development, the demands of society and the expectations of people. Therefore, education in general terms and training constitutions in particular, as open, comprehensive and flexible entities, must consider in their natural dynamics the possibility of incorporating quality elements to guide their actions to achieve greater impact and response.

In the country and within the framework of administrative decentralization and management autonomy, institutions have the opportunity to carry out critical and self-critical reflection processes, in order to determine the real and potential situation based on their vision and mission assumed as social responsibility. Definitely, innovation becomes one of the most effective actions when it is understood as the regulated inclusion of a new and necessary element for the continuous improvement of management and educational action.

Encouraged by the idea that the strengthening of the management capacity of the educational institutions of the university education system gives greater possibilities for experimentation and innovation, and expands the possibility of generating and developing appropriate actions to improve learning levels, respond, appropriately, to the educational demands of the environment and generate an institutional climate that motivates and stimulates the joint effort of the members of the educational community by increasing their commitment to the results, alternatives oriented to bring closer the decision-making process in administrative, curricular and pedagogical matters to educational and university centers are postulated.

These ideas have gained acceptance and generated consensus in different international events. The Ministers of Education of Latin America and the Caribbean, for example, indicated in point 6 of the Cochabamba Declaration the following:

That a new type of educational institution is required. It is essential that educational institutions be more flexible, with a high response capacity and endowed with effective pedagogical and management autonomy. Provide them with sufficient support to organize and execute their own educational projects responding to the needs and diversity of the community they serve, built collectively and assuming—together with state entities and other managers, teachers and administrators—the responsibility for the results (UNESCO, 2003).



The report of the International Commission on Education for the 21st Century to UNESCO, chaired by Jacques Delors, also recommends administrative decentralization and the autonomy of establishments because of the possibility they open for the development and generalization of educational innovations.

A rethinking of education is being carried out in the country with the intention of modernizing it through administrative regionalization (economic de-concentration and administrative decentralization), but in the absence of a budget, its progress is slow and therefore there are few strategic nationwide and regional plans that promote educational reforms at all levels, for educational innovation and continuous improvement of educational management.

Within the framework of this panorama, the National University of Cañete (UNDC) develops its academic and administrative activities in accordance with University Law 30220 and its own statute. The presence of this university is important since they train professionals to boost regional and national development. However, the efforts made in the country are not entirely sufficient, since the structural and cyclical changes of the national and world economy require new policy guidelines, in order to ensure that the future professional is a leader, competitive, complete, entrepreneur and with positive values, so he/she can access the labor market as a dependent worker and/or create his/her own company.

Therefore, the requirement of an administrative and academic process with an innovative character is indispensable if the faculties of business sciences, engineering, and agronomic sciences are required to provide quality education and that this is endorsed by the accreditation law of Peruvian universities.

In this dynamic, innovations in curricular designs, in pedagogical and didactic methods, in laboratories, in social projection, in scientific research and in academic and administrative management, are of the utmost importance, because in the end what the laws related to accreditation seek is the continuous improvement in the university system and this will be achieved with a culture of innovation through a daily self-assessment process of higher education institutions and in particular the university under study.

Nowadays, academic planning work is insufficient because the faculties have active curricula since 2014 and 2016. Since that time there have been no evaluations that have enabled curricular innovation. In this case, the UNDC has major disadvantages because the elaboration of the syllabus is routinely carried out according to the criteria of the teachers of



each subject. Generally, the theory is not embodied in the concrete reality, there is duplication of content, the evaluation methods are not often related to the syllabus or in any case there are outdated contents regarding the evolution of contemporary technology.

In this regard, according to Aguilar (2011), technology is understood as a set of knowledge, skills, and means necessary to reach a predetermined end. Others conceive it as a set of technical knowledge, scientifically ordered, that allow to design and create goods and services that facilitate the adaptation to the environment and the satisfaction of human needs and desires.

In addition, the articulated set of driving actions of the Engineering Faculty of the UNDC responds in the short term and is expressed through the Annual Work Plan of each Career Directorate, the Research Directorate, the Social Projection and University Welfare Directorate, where aspects related to the objectives, goals, programming of activities, budget and evaluation are detailed. Likewise, in the formulation and evaluation of the plans or programming of activities only the teachers appointed by the Organizing Commission participate. The contracted teachers, the students, and the graduates do not participate in these processes.

Similarly, the determination of who makes and how decisions are made and coordination are not clearly understood by teachers, students, and administrative staff. The agreements are taken by the Organizing Committee and are known only to the members, therefore, compliance with the provisions does not tend to a minimum of requirements, being these by obligation or spontaneous.

The lack of a defined plan of what is intended to be as an expression of the consensus of those who take part in the educational action and the absence of innovative educational proposals, which from reality, the characteristics of the environment and institutional potential, allow contextualization a pedagogical and management proposal, make educational work irrelevant regarding the demands and needs that are required of students for their optimal performance in individual, social and natural reality, and to attend to their needs according to their levels of development and maturation. Overcoming such limitations is a challenge and an urgent requirement.

Finally, within the framework of the minimum standards for self-assessment for accreditation purposes, in the five careers currently available to the university established by SUNEDU, this research becomes relevant because it constitutes an essential self-assessment instrument for the development and subsequent accreditation of these professional careers.





Regarding the background of the research, it is in the mid-1960s that innovation begins to be part of pedagogical discourse and school culture. In the USA, the proliferation of innovations in school education emerges as an alternative response to emerging social problems. It was thought that these problems could be addressed from the School if a series of reforms were applied. In this sense, the National Science Foundation (NSF) proposed to radically transform the teaching of science and mathematics in schools, by replacing the corpus of scientific knowledge with a new approach focused on search and discovery by means of experimentation, so that students and teachers can adapt quickly to changes in a technological society.

Due to the effect of this movement, reforms in social sciences and English also began to be considered. In 1965 another reform was launched whose purpose was to meet the educational needs of the most disadvantaged students to ensure equal opportunities in school education. Programs were also launched for the creation and dissemination of resources and materials that would facilitate teachers to receive the effects of change. The culture of innovation that is generated in this country has a great influence on the direction taken by educational innovations in other countries.

In this period, the technological approach dominates the notion of innovation and the way in which it is implemented. This, according to De la Torre (1994), “will be marked by the product’s seal, which is what interests scientific and technological knowledge of the moment. The model is inspired by industrial innovation strategies applied in developed countries” (p. 41). In the perception of Carbonell (2002), “educational innovation is considered as an external process defined by the knowledge of experts and legal requirements, reproducing in the school the technical and social division of work between people who think and plan” (P. 36). Under this approach, the school institution is conceived as a bureaucratic organization that does not take into account its complexity or dynamic interactions among its members.

From the decade of the 70s, the political approach and the cultural approach arose in contrast to the vertical model of innovation. The cultural approach understands innovation as a phenomenon of cultural relationships between experts who design innovation projects and teachers who filter, redefine and apply innovations according to their concrete reality. This approach considers the school or university institution as an organization with its own culture, which mediates the innovation process and its development. The ‘socio-political perspective’ possesses

innovation in its context and recognizes the interrelationships between professional, ideological, social and cultural interests of the directors, teachers and educational administrators expressed when implementing innovation and concretizing the teaching and learning processes.

According to Blanco and Messina (2000), when referring to innovations in Latin America, they point out that in the decade of the 70s and 80s there is a great development of innovative experiences in formal and non-formal education, many of them were respondents to the established system and they were nourished by different pedagogical currents that denounced, from practice, an academic education that did not promote critical thinking or autonomy. They also point out that in the framework of the reform processes of the 1990s that promotes greater participation of managers, teachers, and administrators, educational innovation has been associated more with international quality and competitiveness, since the central axis of all the reforms is the decentralization and greater autonomy of the centers in decision-making in order to improve the quality and equity of education.

In Latin America, one of the problems detected around innovation has to do with the lack of research processes and systematization of innovations. The study conducted by Abraham and Rojas (1997 in Blanco and Messina, 2000) says:

Based on the analysis of the information in the *Latin American Information and Documentation Network* (REDUC) until 1995, they report that just over 10% of the information corresponds to research in education. From the analysis of 50% of research information (335 investigations), it was found that only 62 contained descriptions or information on innovations and that the most used methodology was that of case studies and action research (p. 287).

In order to identify, select and disseminate the most significant and successful innovative experiences developed by the member countries of the Andrés Bello Agreement (CAB), nine meetings of innovators and researchers in education have been developed in Peru, Chile, Ecuador, Bolivia, Colombia, Venezuela, Cuba, Panama, and Spain. The respective reports have been published and disseminated from each of these meetings, and documentary research has been promoted such as the one presented in the book *State of the art on educational innovations in Latin America*. According to Blanco and Messina (2000), this book, based on the study of 193 innovations from 17 countries in the region, presents a vision on the origin, development, stagnation, and continuation



of innovative experiences, their main trends and the differences between countries and subregions.

The Innovemos Network of UNESCO (1993), through a website, seeks to promote the exchange and dissemination of innovative experiences, promote their evaluation, systematization, and research, build a conceptual framework on the processes of change in the region and the establishment of effective mechanisms for consolidation and continuity of innovations. This bank of innovations based on the application of a series of preliminary criteria to identify and select innovations, offers educational experiences, specially selected, that have research and/or evaluations that have shown that it is really an innovation and that have a positive impact on the transformation of educational practices and on the learning of students.

206



In Chile, specifically in the *Educational Research Bulletin*, edited by the Pontifical Catholic University of Chile, reports on research projects related to the topic of educational innovation, among them, the study by Garay (1996), which exposes a comparison of two innovation projects developed in Chile: learning guidelines for a desirable school and educational improvement projects. The study analyzes the data collected through quantitative and qualitative techniques and tries to know the conceptions of Chilean teachers regarding the innovative process and the most appropriate models for its realization.

Likewise, Ríos (2000), in his study with exploratory-descriptive characteristics, is limited to professionally characterizing innovators and describing the main aspects of their innovations. The research uses a design that contemplates the presence of a group of teachers involved in educational improvement projects and a comparison group consisting of teachers who are not involved in such projects. The data collected from the sample is analyzed through descriptive statistics and subsequently performs an interpretive analysis of them.

In Peru, experiences of institutional and pedagogical innovation have been developed aimed at improving educational quality. According to Bello (et al., 1994), they have prepared a record of innovative experiences developed in urban areas. Pozzi and Zorrilla (1994) make a record of innovative experiences in rural areas, taking into account those that have been developed in cooperation between the State and international organizations, those that have been due to foreign NGO initiatives and those that were developed at the initiative of national groups.

Blanco and Messina (2000) say that Peru fundamentally informs about nongovernmental experiences, of local scope, especially concen-

trated in curriculum, teacher training and educational proposals to address diversity. Highlighting that all informed innovations promote the participation of the educational community, teacher training, materials development and the use of active methodologies.

This is how innovations in education appear linked to ideological, social and economic factors, and their consideration as such depends on the situation in which they emerge, who their promoters are and the extent and impact they have on the satisfaction of needs of the educational institution or society.

In Peru, a rethinking of education is taking place within the framework of another, of greater scope, that intends to modernize the State through decentralization and regionalization. The main indicator of this intention is the enactment of new education law, a new university law and the adoption of broad national reform plans.

Beyond the configuration of a new structure of the Peruvian educational system, in which the laws forge a different way of conceiving the institutions, the expectations and dynamics of their internal functioning, and in close articulation with these aspects raises the need for the institutions that make up the education system, to leave their endogamy and increasingly link to the communities in which they are inserted through consultative bodies and the world of production and work.

According to Espinoza (2000), the organization and government of the university is “in crisis not only because of the lack of its conceptual essence, but because of a bad administrative structure, product of a misunderstood internal democracy” (p. 196). This indicates that bureaucracy does not do any good to the first house of higher education, but rather contributes to its permanent backwardness and coexistence with the current social system.

Most universities, whether public or private, in their own definition, must reflect the change, the shift in the paradigm, they are in crisis because of their bad organization and poor administration. These respond to the interests of political-supporter groups that hegemonize bureaucratic control and, therefore, develop in an isolated context where there is no effective link to effectively use their human resources. Efforts are needlessly duplicated, and budgets that could well serve to effectively fulfill the primary functions of the university are misallocated.

For its part, teachers claim ‘university autonomy’, defends ‘its district of knowledge’ without highlighting in any way the principle of that autonomy. The different forms of organization were mostly ‘imported’ through faithful copies from other countries and as such belonging to





other realities. Thus the academic departments and institutes were conceived. In the universities these criteria are not discussed, rather the concern about the control of power is put on the table not with the positive intention of improving it, of overcoming it, but of manipulating it according to interest groups, to orient it towards persistent corporatism.

Then, Espinoza (2000) asks, “universities: organized anarchies or unstructured organizations?” Anarchy implies disorganization, disorder, where each person does their own thing without respecting any norm. There is “a well-organized mafia where anarchy is part of the system or is in organizational knowledge or culture” (p. 54). With this attitude, the university is against itself, since it is against the advancement and progress of its status and as such, lacks of input, creativity and new ideas for the benefit of the community. The reference of universities as “unstructured organizations” (Mintzberg and Raisinghani, 1986 in Espinoza, 2000) is in relation to the existence within them of uncoordinated units, both academic and administrative, the academic takes place through its system and the administrative, simultaneously, through its own.

Finally, Espinoza (2000) supports “the necessary university”. This indicates that it is a current proposal, realizable in a society such as Peru, which has the following characteristics:

- The university as a perception of the political, economic and social situation of the Latin American context.
- The development of criticism and knowledge as processes of apprehension.
- There is no ‘for tomorrow’, today is terribly demanding.
- An academically and administratively organized university that responds to regional requirements.
- A university that would question the social order and the debate of the current issues of society.
- The university reform has to be permanent; no university should be created once.
- Win the university for Latin America in order to be able to transform it into a national development agent.
- The new innovative project must be born from within the same university.

According to these and other studies carried out to date on the university, there is very little left to say, only to add that this institution, complex even in its definition, must fulfill very important functions within society, for which it is necessary and essential the innovation. This is how

its everlasting permanence accompanying civilization could only be due to its own structure supported by four solid columns in its conceptions: philosophy-science-humanism-technology (innovation), which made its own existence possible through centuries and against the onslaught of monarchical, democratic and dictatorial authorities.

The process of change that the Peruvian education system is experiencing is very complex, it requires being clearly aware that it is a phenomenon with multiple dimensions and a long-term task, but also with enormous repercussions in improving the quality of the education system. In the same way, the educational institution that is the university, considered in the new University Law 30220 as a forger of changes, as a seedbed of ideas, of theoretical and practical proposals, must among its objectives write down three basic questions that it needs to meet in society: scientific research, social projection and the formation of professionals at the service of the country.

Proposing a way to resolve the eventual stagnation of the schools, the higher institute or the university requires that managers, professors and administrative staff (educational actors) reflect critically on their pedagogical or administrative praxis as appropriate, and begin quickly with change processes, changes with meaning and effectiveness. Strengthen in the teachers attitudes of openness to change and tolerance of uncertainty that involves any process of change, for which there is no pre-established route or path that is not zigzagging; first it passes through the identification and definition of the potentialities and weaknesses that universities have to implement changes, hence the purpose of this research is to identify the potential for innovation and institutional management of the UNDC in the 2018-2019 period.

Based on the perceptions of educational actors (managers, teachers, and administrative staff) in relation to a set of skills related to self-assessment, problem definition, search for solutions, planning of actions, systematic execution of plans, the evaluation of the results and the integration of innovations in their culture, we can identify and describes the innovative potential of the educational institution, and then propose a set of recommendations that help the development of collaborative innovations, prioritizing collective and gradually more autonomous work, intrapersonal and interpersonal reflection of managers, teachers and administrative staff on their praxis and educational relationship strongly influenced by conscious and unconscious beliefs rooted in their thinking.

The research problem was formulated as follows: What is the relationship between the potential for innovation and the institutional ma-



nagement performed by management, teaching and administrative staff of the National University of Cañete de Lima, Peru? The objective was to determine the degree of correlation between the potential for innovation and the institutional management of the key actors of the UNDC. The hypothesis states that there is a direct and significant relationship between the potential for innovation and the institutional management of the management, teaching and administrative staff of the UNDC.

The research is important because it made it possible to generate and systematize useful information for the governing body of the university and to all the managers, teachers and educational administrators involved in innovation, to guide timely and effective decision making aimed at improving academic and administrative management of the university organization. The investigation is justified on the following criteria:

210



- *Convenience*, that aspect is crucial, since this research is convenient for this time and space, as it served to know the levels of innovation and institutional management and thus extend it to other universities in the other regions.
- *Social relevance*, to the extent that managers, teachers, and administrators raise their social and moral conscience, and serve as a starting point for subsequent accreditation, and if the university improves, our society will also improve.
- *Practical implications*, the innovative potential of managers, teachers, and administrators was measured; In addition to the institutional management of the university of the study sample.
- *Theoretical value*, the information collected and processed within the university system, will support this and other similar research, as it will enrich the theoretical framework and/or body of knowledge that exists on the subject in question: The innovative potential and university institutional management.
- *Methodological utility*, because it allowed to implement scientific research and, use techniques and procedures to conduct our work and reach valid and reliable conclusions.

Before presenting the different perspectives that address the practice and development of innovation, the paradigms of scientific rationality that mark their orientation are described. This is because every concept and every educational problem that is theoretically addressed will have to be done in the light of the paradigmatic approaches to scientific rationality from which it starts.

Giroux (1980 in De la Torre, 1994) refers to three major structures of rationalities understood as the set of ideas, beliefs, attitudes, feelings, and practices that mediate the individual with his environment and that, are shared by the community of scientists who assume him.

Educational innovation is not an immovable field, the fundamental perspectives that have marked its practice and development have been projected from the paradigms of scientific rationality described in the previous paragraphs. In other words, behind each perspective lies a structure of rationality that bases its orientation. For House (1998), recounting its historical evolution distinguishes the following perspectives: technological, political and cultural. Leithwood (1990) adds the perspective oriented to the solution of problems, the same one that De la Torre (1994) assumes under the name of “integrative or strategic orientation”, in which innovation is explained as management and problem-solving.

In general, the authors cited agree on the idea that educational innovation involves phases and processes. According to Aguerrondo (1992), from the observation of a series of innovative experiences in Latin America, the planning and evaluation stages are incorporated. The incorporation of these two aspects provides a more complete picture of the process of endogenous development of innovations based on project strategy.

Regarding the stages of the innovation process, Chuquilin (2005) says that the new model proposal includes five stages: gestation, planning, execution, evaluation, and institutionalization. In each of the stages, a series of processes that interact with each other also affect each other. What happens at one stage of the innovation process affects the subsequent stages, generates new elements that influence the direction of the proposed change and condition, to some extent, the possibilities of permanence or abandonment of innovation. The stages of the proposed model are presented in Figure 1:

- *The gestation of innovation* is the process that leads to initiate innovation. It involves making decisions to generate it and determining its direction and scope in coherence with certain educational values. It takes into account aspects such as the level of awareness that members of educational institutions have about the problematic situation and the need to promote changes that contribute to overcoming that state of dissatisfaction.
- *Planning of the innovation* supposes to elaborate the proposal of innovation and implies the analysis of the reality and the determination of the educational needs on which it is going to



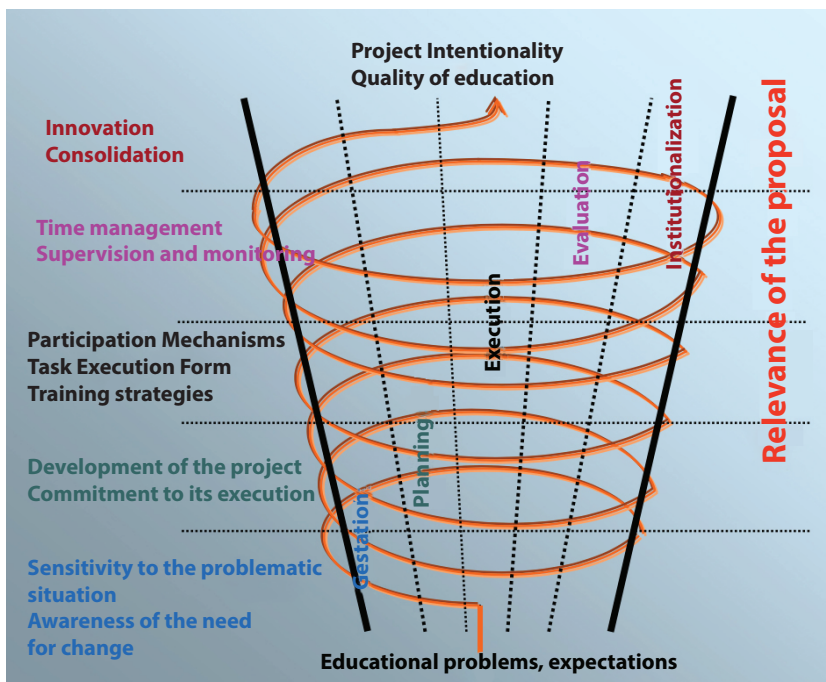
act, the determination of the content of the innovation and its systematic organization in plans, and the personal or organizational implications.

- *The execution of innovation* involves starting the set of activities that the innovation project implies, setting in motion a series of events that have to do, among other aspects, with the way in which educational actors participate in which elements related to specific roles converge, decision making and authorizations, training of personnel, resource assistance and organizational restructuring.

Figure 1

Stages of the innovation process: model used in the present investigation

212



Source: Chuquilin, 2005

- *The evaluation of the innovation* is understood as a punctual and longitudinal process, which is about offering information, not only of the results, but also of the whole innovative process allowing to assess the degree of internalization and consolidation of the change. It has to do with time management, super-

vision, and monitoring. The evaluation, rather than a stage that is linked to the gestation, planning, execution, and institutionalization is consubstantial to each of them and involves issuing a value judgment to improve or reorient the traveled path, not only in each of them but also in the whole process.

- The *institutionalization of innovation* is understood as the progressive evolution of innovation towards its consolidation, that is, it strengthens and enriches itself in the educational organization.

The model is based on the assumption that the shared intention of the group of teachers, which was born in the reflection of their pedagogical practice was articulated around an innovation project, making possible in a progressive way, the transformative action that produces changes in reality and at the level of relationships between subjects.

Regarding the dimensions, according to Chuquilin, (2005) we have:

- *Capacity for critical and self-critical reflection*, which is the knowledge and reflexive assessment of educational problems, beginning with a certain capacity for self-criticism and criticism of teachers, in the face of their professional work, the reality of students and the social context in which they work by judging them and introducing new ideas from which they can be understood and solved.
- *The planning of actions*, which consists in the realization of plans and the evaluation of the innovative process, which involves a coherent organization of the activities that involve the innovative processes, with the purpose of enabling and stimulating efficiency in the performance of the different works. These are foreseen in methodically organized plans. It has an articulatory character and involves involving educational actors throughout the process.
- *The consolidation of innovation*, which assumes that it is no longer considered as something new and becomes a common way of doing things in the university organization.
- *The character of the institution*, which consists in the knowledge and achievement of the university in its desire for institutionalization.
- *The physical and technological infrastructure*, which includes the physical and technological aspects that the university must have in pursuit of its institutionalization and accreditation.



- *The organization and administration*, which is the type of organization that the university has for its management.

On the other hand, university institutional management assumes that the fundamental task in the redesign of university organizations is to review the dissociation between the specifically pedagogical and the generically organizational. This involves visualizing that the lever of educational transformations lies in integrated management of the strategic educational institution. Only a profound transformation of the way of working in education will allow the educational system to be placed in optimal conditions to move towards the strategic objectives that are challenging it, such as quality, equity, the relevance of the curriculum and professionalization of educational actions.

The transformation in which the Peruvian university system is immersed imposes a transition from a present model of university administration, rooted in the past, towards a present model launched towards the future, although many times it seems only a desire: strategic educational management.

A first approach to the concept of management is to recognize its affiliations. Management is an Anglo-Saxon term that is usually translated into Spanish as 'direction', 'organization', etc. But strictly, as Sánchez (2001) expresses, 'management' is a term that encompasses several dimensions and very specifically one: 'participation', the consideration that this is an activity of collective and not purely individual actors.

From a point of view more linked to organizational theory, university management is seen as a set of theoretical and practical processes horizontally and vertically integrated within the university system, to fulfill the social mandates. University management can be understood as the actions developed by the managers who pilot large organizational spaces. It is a synthesis capable of linking knowledge and action, ethics and efficiency, politics and administration, in processes that tend to the continuous improvement of educational practices, to the exploration and exploitation of all possibilities and to permanent innovation as a systematic process.

For Johnson and Evans (1997):

The types of leadership that characterize directors are done using a survey. There it has been identified that they use a large amount of personal power, cooperative conflict management and a supportive communication style, present the appropriate conditions to achieve the transforma-



tion of schools towards the production of a collaborative culture in their organization (p. 154).

In this brief review of work on institutional management, several issues are clear. The first refers to the repeated need of revision or identification of the processes of organizational transformation. In each of them, it is observed that the purpose of change is present in the evident organizational transition of each of these institutions; The interesting thing is to ask towards where do they transform. The second of the two questions is to ask about development and research about the power that is exercised in management or through management and conflict situations from which the organization of the school is made or transformed. In the case of the review of studies or research in Mexico City or Jalisco, none expressly refers to conflict management or power, although in some way they refer to these factors as one of the most common labor situations.

These three recurring aspects in the work, the transformation of management, power, and conflict, correspond to the three issues that will be addressed in this investigation. The first is the most comprehensive and refers to the direction of management transformation.

Regarding the new leadership role of the university in university administration, according to González and Ayarza (1997): "The organization of the structure of university personnel is characterized by a rigid and hierarchical structure in the administration sector. Here more flexible and flat structures and forms of autonomous organization should be used" (p. 114).

Although it is true, the structure of the personnel working in the universities is duly regulated and, in all cases, it is very rigid and hierarchical, in some university institutions in the provinces the control is almost nil and requires corrective action.

The university management increasingly develops towards management anointed with a strong orientation towards strategic development, planning, control, marketing and a modern system of information management.

The joint action of the professors with other scientific experts in the usual activities of the university extends to the control of projects, budgets, and resources. The university administration deals with the uncomplicated development of teaching and research activities and today provide information to the system for effective decision making. The administrative exercise with claims of the legal bureaucracy of a higher office is dead, although some administrative personnel have not yet managed to completely change their thinking. To make these changes it is necessary to adapt the structures and train the responsible people according to the changes.



Materials and methods

The scientific method is the active component that typifies science since the fundamental unit of science lies not so much in its content but in the adoption of a common method of approach and research. According to Pardinás (2004): “The method of scientific work is the succession of steps we must take to discover new knowledge or in other words, to test hypotheses that explain or predict behaviors of phenomena unknown so far” (p. 72). Without a doubt, all that humanity has achieved is thanks to the application of the scientific method.

On the other hand, this research is applied. In this regard, Ávila (2001) differentiates the type of applied research from descriptive research when he mentions that “applied research is interested in the application of knowledge to the solution of an immediate practical problem, seeks to know to do, to act, to build, to modify, is concerned about the immediate application of a concrete reality” (p. 38).

The study population was made up of 154 subjects, including managers, teachers and administrative staff of the UNDC. The sample was taken probabilistically and stratified.

Chart 1
Population and study sample

Population	Number	Percentage	Sample	Percentage
Managers	10	6,49	6	6,49
Teachers	105	68,18	63	68,18
Administrative	39	25,32	23	25,32
Total	154	100	92	100

Source: the authors

After selecting the appropriate research design (correlational/cross-sectional) and the representative sample (92 subjects) according to the study problem and objectives, the data on the study variables, dimensions, and indicators involved in the research were collected.

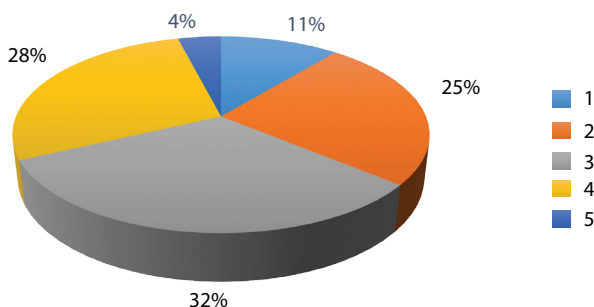
The research instrument we designed was the two Likert-type questionnaires, the same ones that passed through the criteria of Reliability (Cronbach’s Alpha = 0.974) and construct validation (Confirmatory Factor Analysis = 0.968). The respective authorization was requested from the university authority; In addition, informed consent was presented to the specified sample of the study, which was made up of 6 managers, 63 teachers, and 23 administrators.



Analysis and results

The first dimension was analyzed, for which the Likert typology was used, according to the equivalence: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree and 5 = Blank, the subject does not know/have an opinion.

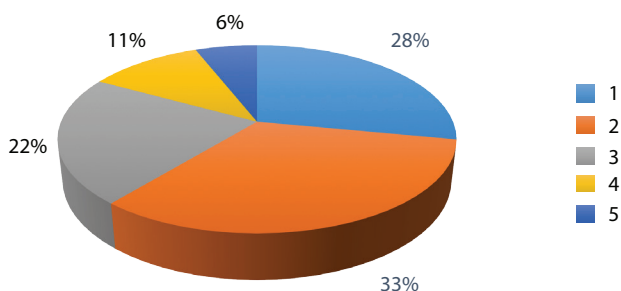
Figure 2
Capacity for critical and self-critical reflection



Source: the authors

Regarding the first dimension, capacity for critical and self-critical reflection, 32% responded that they agree with that capacity of the directors, teachers and administrative staff of the university. Then, 28% responded strongly agree. Also, 25% disagree, 11% strongly disagree and finally 5% answered blank. The vast majority of the subjects (managers, teachers, and administrators) responded that they agree that university staff has a good capacity for critical and self-critical reflection.

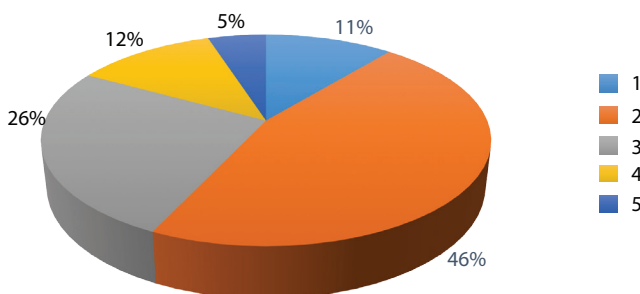
Figure 3
Action Planning



Source: the authors

Regarding the second dimension of the variable, planning of actions, 33% responded in disagreement with respect to said category. Also, 28% strongly disagree, 22% agree, 11% strongly agree and 6% responded blank. The vast majority of the subjects (managers, teachers, and administrators) responded that they disagree that the university staff has good planning of actions, which worries the university community. Now let's see the realization of plans.

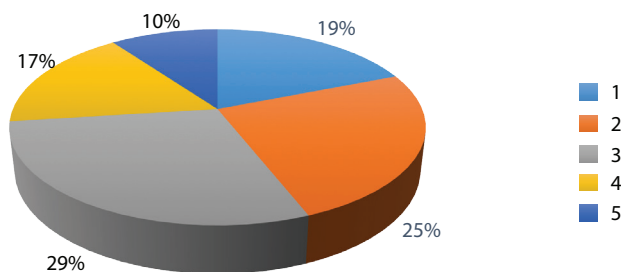
Figure 4
 Realization of the plans



Source: the authors

Regarding the third dimension of the variable, implementation of plans, 46% responded that they disagree with said capacity of the directors, teachers and administrative staff of the university. Then, 26% responded that they agreed. Also, 12% strongly agree, 11% strongly disagree and finally, 5% answered blank. The vast majority of the subjects (managers, teachers, and administrators) responded that they disagree that the realization of plans materializes. logically, if they are not planned, they will not be carried out. Let's now look at the evaluation of the actions taken.

Figure 5
Evaluation of the actions taken



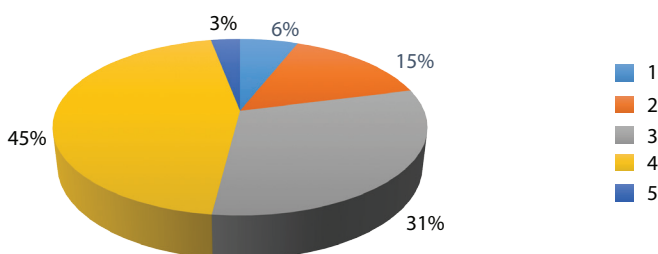
Source: the authors

Regarding the fourth dimension, 29% responded that they agree with that capacity. Likewise, 25% responded in disagreement. In addition, 19% strongly disagree, 17% strongly agree and finally, 10% answered blank. The vast majority of the subjects responded that they agree with the realization of the evaluation of the actions that were executed in the previous periods. Finally, the third and last dimension of variable 1 will be seen.

219



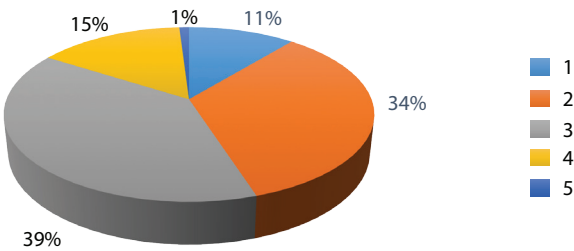
Figure 6
Innovation Consolidation



Source: the authors

With respect to this last dimension of variable 1, called consolidation of innovation, 45% responded that they strongly agree with that capacity. Then, 15% disagree, 6% strongly disagree and finally 3% answered blank. The vast majority of the subjects (managers, teachers, and administrative staff) responded that they agreed with the consolidation of the executed innovation. Regarding the second variable we have:

Figure 7
Affirmation of the character of the institution



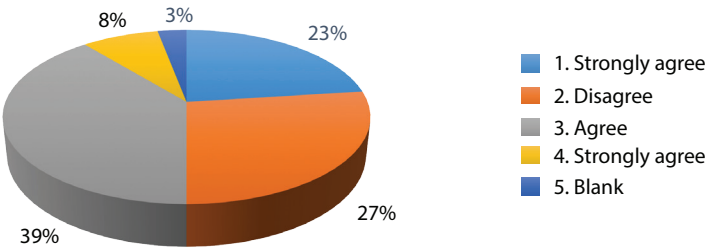
Source: the authors

220



Regarding the first dimension of the university institutional management variable, called the affirmation of the character of the institution, 39% responded that they agree with said capacity. Then, 34% responded to disagree. Also, 15% strongly agree, 11% strongly disagree and to conclude only 1% answered blank. The vast majority of the subjects (managers, teachers, and administrators) responded that they agree with the affirmation of the nature of the UNDC. Now let's look at the second dimension:

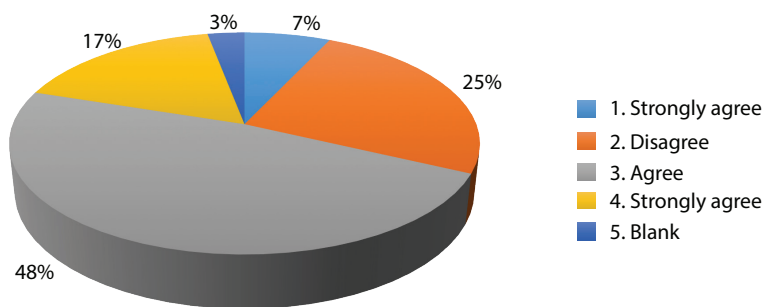
Figure 8
Physical and technological infrastructure



Source: the authors

Regarding the second dimension, called physical and technological infrastructure, 39% responded that they agree with that capacity. Then, 27% responded that they disagree. Also, 23% strongly disagree, 8% strongly agree and finally, 3% answered blank. The vast majority of the subjects (managers, teachers, and administrators) responded that they agree with the physical and technological infrastructure of the UNDC. Finally, the third dimension will be seen:

Figure 9
Organization and administration



Source: the authors

Regarding the third dimension, organization, and administration, 48% responded that they agree with that capacity. Then, 25% responded to disagree. Also, 17% strongly agree, 7% strongly disagree and finally, 3% answered blank. The vast majority of the subjects (managers, teachers, and administrators) responded that they agree with the organization and administration of the university.

221



Hypothesis verification

Null H_0 Hypothesis: there is no direct and significant relationship between the potential for innovation and the institutional management of the educational actors of the UNDC.

Alternate H_1 Hypothesis: there is a direct and significant relationship between the potential for innovation and the institutional management of the educational actors of the UNDC.

Level of significance or risk: $\alpha = 0.05$.

The most appropriate statistic test for this case is Spearman's "rho".

Chart 2
statistic test calculation: general hypothesis correlation coefficient

			Innovation potential	Institutional management
Spearman's rho	Innovation potential	Correlation Coefficient	1.000	.902(**)
		Sig. (2-tailed)	.	.000
		N	92	92
	Institutional management	Correlation Coefficient	.902(**)	1.000
		Sig. (2-tailed)	.000	.
		N	92	92
** Correlation is significant at the 0.01 level (2-tailed).				

Source: the authors

Now, taking Hernández as a reference (et al., 2014), we have the following equivalence:

Chart 3
Statistic decision since rho = 0.902 and p-value = 0.000 < 0.010

Perfect negative correlation: -1
Very strong negative correlation: -0,90 a -0,99
Strong negative correlation: -0,75 a -0,89
Average negative correlation: -0,50 a -0,74
Weak negative correlation: -0,25 a -0,49
Very weak negative correlation: -0,10 a -0,24
There is no correlation: -0,09 a +0,09
Very weak positive correlation: +0,10 a +0,24
Weak Positive Correlation: +0,25 a +0,49
Average positive correlation: +0,50 a +0,74
Strong positive correlation: +0,75 a +0,89

Source: the authors

- *Statistical conclusion:* it is concluded that there is a direct and highly significant correlation between the potential for innovation and the institutional management of the educational actors of the UNDC.

Discussion and conclusions

As can be seen in the statistical charts, in the first dimension the capacity for critical and self-critical reflection, the innovation potential of the managers, teachers and administrative staff of the university is favorable, which is verified with the processed data. Likewise, regarding the institutional management variable, with the processed and organized data it can be evidenced that the university tends to improve its management in a gradual and ascending way, logically that this is directly related to the innovation potential of its actors (managers, teaching and administrative) which validates the research.

The potential of innovation that managers, teachers and administrative staff have for a better institutional management of the UNDC is acceptable, according to the statistical results at the average level of the surveys (29% agree and 24% strongly agree), on the perceptions and representations that managers, teachers, and administrative staff have about their educational task.

Considering the theoretical approaches and empirical results of this research, it is possible to think that in the university there are many favorable possibilities for the start of innovative processes. In this process, the central support is the permanent training of managers, teachers, and administrators, understood as the reflection and self-critical perception of their academic and/or administrative practice, to achieve a deep understanding and resolution of the problems in question.

The university plans its activities only at the level of managers and the coordinators or commissions that involve the innovative processes, with the purpose of enabling and stimulating efficiency in the performance of the different areas, but they have a weakness since the of short and medium-term plans are not developed with the full participation of the entire university community.

The capacity that the managers, teachers and administrative staff of the UNDC have to carry out, in a participatory manner, the activities foreseen in the development plans, which imply the implementation of the dynamics of change and improvement, are really limited since the simple majority of managers, teachers and administrators are not satisfied (42% disagree and 11% strongly disagree).

The ability that the managers, teachers and administrative staff of the university have to implement the strategies aimed at evaluating, through control and monitoring of objectives and goals, enriching and strengthening the proposals for improvement in the university organi-



zation, is relatively satisfactory given that Almost half of the respondents agree (29% agree and 17% strongly agree).

The UNDC, regarding its physical and technological infrastructure, has duly planned short and medium-term projects, which demonstrate the innovation potential of its management, teaching and administrative staff.

The ability that managers, teachers and administrative staff of the university have to consolidate innovation through the integration of innovative plans in the institutional culture and external projection is regular because the vast majority of respondents, at the average level, demonstrate compliance with the innovation consolidation (31% agree and 45% strongly agree). This indicates that the management, teaching and administrative staff are able to achieve the integration of innovation in their culture and to externally project themselves, despite the limitations to disseminate the experiences.

Faced with the challenge that occurs in higher education, innovation is required, primarily, at the structural level. Innovations or changes that can provide the university system with maximum social efficiency, without limitations or discrimination of any kind, depending on educational quality through strategic and transparent management must be undertaken.

The university points towards innovation, to the extent that the close teacher-student relationship integrates the business and society as a whole in its achievement.

University education in Latin American countries has brought about the creation of evaluation and accreditation systems that incorporated new autonomous approaches aimed at evaluation and accreditation that guarantee the quality of faculties, professional schools, and research institutes. In that sense, research provides the first foundations for the subsequent accreditation of the professional careers of business sciences, engineering and agronomic sciences in the province of Cañete.

Conclusions

- With a level of significance of 5%, it has been determined that there is a direct and highly significant correlation between the potential for innovation and the institutional management of the educational actors of the UNDC.
- There is a direct and highly significant correlation between the capacity for critical and self-critical reflection of management,



teaching and administrative staff, with the affirmation of the institution's character in the UNDC.

- In the same way, there is a direct and highly significant correlation between the planning capacity, the participatory realization of the activities and projects, and the implementation of the strategies of the managerial, educational and administrative personnel, with the physical and technological Infrastructure in the UNDC.
- And there is a direct, highly significant correlation between the ability to consolidate the innovation of management, teaching and administrative staff, with the respective organization and type of administration in the UNDC.



Bibliography

AGUERRONDO, Inés

- 1992 La innovación educativa en América Latina: balance de cuatro décadas. *Perspectivas Revista Trimestral de Educación*, 22(3). UNESCO.

AGUILAR, Floralba

- 2011 Reflexiones filosóficas sobre la tecnología y sus nuevos escenarios. *Sophia, Colección de Filosofía de la Educación*, 11, 123-174.

ÁVILA, Roberto

- 2001 *Metodología de la investigación*. Lima: Estudio RA.

BELLO, María, PINTO, Luis & TORRES, Carlos

- 1994 *Situación educativa urbana en Foro Educativo, Protagonistas de la Educación Rural y Urbana en el Perú*. Lima: Foro Educativo.

BLANCO, Rosaura & MESSINA, Gloria

- 2000 *El estado del arte sobre las innovaciones en América Latina*. Bogotá: Convenio Andrés Bello.

CARBONELL, Juan

- 2002 *La aventura de innovar: el cambio en la escuela*. Madrid: Paraninfo.

CHUQUILIN, Jorge

- 2005 *Caracterización del modo en que directivos y docentes de centros educativos públicos de la provincia de Lima, república del Perú innovan en el ámbito de la gestión de sus centros educativos*. Pontificia Universidad Católica de Chile.

DE LA TORRE, Saturnino

- 1994 *Innovación curricular, procesos estrategia y evaluación*. Madrid: Dykinson.

ESPINOZA, Nancy

- 2000 *Gerencia universitaria: universidad peruana y tercer milenio*. Lima: San Marcos.

GARAY, Víctor

- 1996 Modelos de innovación educativa: investigando nuestras escuelas. *Boletín de Investigaciones en Educación*, 11. PUCP de Chile.

- GONZÁLEZ, Luis & AYARZA, Hugo
1997 *Calidad, evaluación institucional y acreditación en la educación superior en la región latinoamericana y del Caribe* (Tomo I). Madrid: Paraninfo.
- HERNÁNDEZ, Roberto, FERNÁNDEZ, Carlos & BAPTISTA, Pilar
2014 *Metodología de la investigación*. México DF: McGraw-Hill.
- HOUSE, Elmer
1998 Tres perspectivas de la innovación educativa: tecnología, política y cultural. *Revista de Educación*, (186), 16-26. Madrid.
- JOHNSON, Lois & EVANS, Patrick
1997 Gestión e innovación. *Nuevas Políticas de Desarrollo*, 23(45), 112-125.
- LEITHWOOD, Katherin
1990 Cambio planificado como solución de problemas. *Revista de Innovación e Investigación Educativa*, (5), 65-78. Ley Universitaria N° 30220. Lima, Perú.
- PABLO, Germán
2007 *Noción y estructura del dato*. Lima: Monografía.
- PARDINAS, Joel
2004 *Introducción a la investigación educacional*. México DF: Panorama.
- POZZI, Eliana & ZORRILLA, Luis
1994 Educación rural: estado de cuestión y perfiles de una propuesta de atención a un nuevo proyecto educativo nacional: protagonistas de la educación rural y urbana en el Perú. *Diálogos Educativos*. Lima: Foro Educativo.
- RÍOS, Danilo
2000 Profesores innovadores e innovaciones desarrolladas en escuelas básicas de Santiago. *Boletín de Investigaciones en Educación*, 15. PUC de Chile.
- SÁNCHEZ, Hugo
2001 *Diseños y métodos de investigación científica*. Lima: Mantaro.
- UNESCO
2003 *Resultados de la Conferencia General sobre la Educación*. EUA: Fondo Editorial.
- UNIVERSIDAD NACIONAL DE CAÑETE
2016 *Estatuto de la Universidad Nacional de Cañete*. Cañete: UNDC.



Document receipt date: July 15, 2019
Document revision date: September 20, 2019
Document approval date: November 15, 2019
Document publication date: January 15, 2020

TRANSFORMATIONAL LEADERSHIP

FROM THE PERSPECTIVE OF HUMANIST PEDAGOGY

El liderazgo transformacional desde la perspectiva de la pedagogía humanista

OSCAR ALFREDO ROJAS CARRASCO*

Universidad Miguel de Cervantes, Santiago de Chile, Chile
oscar.rojas@umcervantesecontinua.cl
Orcid code: <http://orcid.org/0000-0002-6739-5559>

AMELY DOLIBETH VIVAS ESCALANTE**

Universidad Miguel de Cervantes, Santiago de Chile, Chile
amelydolly@hotmail.com
Orcid code: <http://orcid.org/0000-0002-5791-8619>

KATIHUSKA TAHIRI MOTA SUÁREZ***

Universidad Miguel de Cervantes, Santiago de Chile, Chile
motakt@gmail.com
Orcid code: <http://orcid.org/0000-0002-4108-957X>

JENNIFER ZURINA QUIÑONEZ FUENTES****

Universidad Miguel de Cervantes, Santiago de Chile, Chile
jennifer.zurina@hotmail.com
Orcid code: <http://orcid.org/0000-0003-3724-0182>

Suggested form of citing: Rojas, Oscar, Vivas, Amely, Mota, Katiuska & Quiñónez, Jennifer (2020). Transformational leadership from the perspective of humanist pedagogy. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 227-250.

* Academic Researcher for the Postgraduate and Research Department of the Miguel de Cervantes University (UMC) Santiago de Chile; Post-Doctor in Finance, Doctor of Science in Economics and Finance from Atlantic International University (AIU), Hawaii, United States; Doctorate in Education from the Private University of Tacna (UPT), Peru; Master Business Administration (MBA) from the University of Talca (UTalca), Chile; Master in Education from the Autonomous University of Chile

** Academic-Researcher Professor at the Miguel de Cervantes University Santiago de Chile. Post-Doctorate in Free Studies; Doctor of Education Sciences, graduated from Fermín Toro University (UFT); Master in Educational Planning from the Libertador Experimental Pedagogical University (UPEL). Educational Evaluation Specialist at the Libertador Experimental Pedagogical University (UPEL); Bachelor of Education in Mathematics, at the University of Los Andes (ULA) Venezuela.

*** Academic-Researcher at the Miguel de Cervantes University, Santiago, Chile. Doctorate in Educational Sciences at the National Experimental University “Rafael María Baralt”, (UNERMB); Master in Business Management, mention in Operations at the University of Zulia (LUZ); Petroleum Engineer from the University of Zulia (LUZ), Venezuela.

**** Academic Professor at the Miguel de Cervantes University, Santiago, Chile. Master in Higher Education Sciences, mention in University Teaching; Bachelor of Integral Education; A lawyer.

Abstract

The purpose of the research was to generate a theoretical construction of transformational leadership from the perspective of humanist pedagogy. The methodology was based on the qualitative paradigm and the phenomenological-hermeneutical method was used. The selection of the five (5) key informants will be carried out under the criteria of being a teacher of higher education, with a long career in the pedagogical exercise and that were in accordance with humanist pedagogy. In order to gather the information, the in-depth interview was used, from which five categories emerged: leading university teacher, humanist pedagogy, leadership, student, higher education and in turn, fifty-nine (59) subcategories extracted from the versionists' discourse. Subsequently, the interpretation of these experiences, knowledge, educational anecdotes was carried out with the theoretical support of transformational leadership and humanistic pedagogy. From the axiological, ontological and teleological perspective, the common factor that lies in the excellence of the leading humanist teachers is their passion for the success of all their students. Finally, the theoretical approach of transformational leadership from the perspective of humanist pedagogy, provides an alternative to higher education in the search for new ways to train an integral, ethical, conscious and committed citizen with their social reality, emphasizing that leadership Transformational actively promotes progress to achieve change purposes leading to personal, organizational well-being.

Keywords

University teaching, transformational leadership, humanizing education, and humanistic pedagogy.

Resumen

La investigación tuvo como propósito, generar una construcción teórica del liderazgo transformacional desde la perspectiva de la pedagogía humanista. La metodología se fundamentó en el paradigma cualitativo y se utilizó el método fenomenológico-hermenéutico. La selección de los cinco (5) informantes clave se realizará bajo el criterio de ser docente de educación superior, con una larga trayectoria en el ejercicio pedagógico y que estuvieran en concordancia con la pedagogía humanista. Para recabar la información se usó la entrevista a profundidad, de donde emergieron cinco categorías: docente universitario líder, pedagogía humanista, liderazgo, estudiante, educación superior y a su vez, cincuenta y nueve (59) subcategorías extraídas del discurso de los versionistas. Posteriormente, se realizó la interpretación de estas vivencias, saberes, anécdotas educativas con el soporte teórico del liderazgo transformacional y la pedagogía humanista. Desde la perspectiva axiológica, ontológica y teleológica, el factor común que radica en la excelencia de los docentes líderes humanistas es su apasionamiento al éxito de todos sus estudiantes. Finalmente, la aproximación teórica del liderazgo transformacional desde la perspectiva de la pedagogía humanista, brinda una alternativa a la educación superior en la búsqueda de nuevas maneras de formar a un ciudadano integral, ético, consciente y comprometido con su realidad social, enfatizando que el liderazgo transformacional promueve activamente el progreso para alcanzar propósitos de cambios conduciendo al bienestar personal, organizacional.

Palabras clave

Docencia universitaria, liderazgo transformacional, educación humanizadora, Pedagogía humanista.



Introduction

In recent years, leadership has been defined as a relationship of influence in which both leaders and collaborators play a relevant role. This approach focuses on the relationship that the leader is able to create with his followers. Several modern models can be framed within the relational paradigm, among them, the best known is the transformative leadership model.

The purpose of the research was to generate a theoretical approach to transformational leadership from the perspective of humanist pedagogy, where leadership becomes a continuous evolution where the leader induces the constant development of those who actively participate to achieve goals and objectives of changes that lead to improving the organization and therefore, the staff that works there. However, many leaders act driven by personal interests, without considering the social welfare and development of their followers. In turn, it is a process that allows leaders to modify structures and where followers can develop the vision and mission presented by the leader. Similarly, from different approaches, styles, and types of leadership, like charismatic, situational and within an increasingly high moral to transform the organization.

Conceptually, the transformational leaders according to Munch (2011) are: “charismatic, entrepreneurs providing a vision and sense of mission, creating pride, gaining respect, trust” (p. 43), so they are inspiring because they induce to realize changes in the perceptions of their followers in order to positively influence them to achieve the objectives within an organization. It should be noted that this research also went through the university context of humanist pedagogy. As noted, Frabboni (2011):

Pedagogy together with psychology, biology, sociology, anthropology, and didactics of education sciences occupies, by its historical and scientific background the most relevant position. The objective of pedagogy is to reflect educational theory and practice to promote concrete transformation actions and achieve a congruent model that responds, both in theory and in practice, to the intentions and the university context (p. 89).

The pedagogue is a student of the educational problem that continuously reflects and reviews his teaching and learning process adapted to the realities of this era of knowledge. For this reason, at the university level, it is necessary to induce the educational process centered on the student, demanding the reforms and policies that lead to increasing educational processes from the contents, methods, practices, and means of carrying out the educational praxis, based on new perspectives where the authors of the educational event interact in a bidirectional way.





In Latin America, there has been a series of educational reforms since the 1980s. According to Martinic (2010) who exalts: “the first one and which prevailed in the 80s are institutional reforms aimed at reorganizing the management, financing, and access to the system” (p. 90). By the 90s, these changes are reaffirmed in education through processes and results consistent with reality, by 2000 the State and the communities establish new ways of relating due to changes in thinking, organization, and procedures that are applied in the educational task.

This is especially important at the university level. Knowing their work and generating evidence that allows correlating their performance with the students’ is a valuable contribution so that the school system can move forward in terms of learning quality. In the search for this, Sánchez and Jara (2018) consider that: “the teacher is constantly busy learning more about himself and his way of working, developing a certain understanding of teaching” (p. 251).

Hence, understanding is framed as part of the divorce generated by articulating scientific and technological knowledge, in turn, it is sought that the teaching performance is contextualized, achieving the discussion takes place and therefore, allowing to link it together with daily practice, in this way the Human capital is the dynamic and changing within an organization, because it is emerging towards growth and development. Seen in this way, the human being as an essential element within the organizational instances, especially in the educational environment must be focused on the pursuit of educational quality.

As stated by the World Declaration on Higher Education in the 21st century of the United Nations Educational, Scientific and Cultural Organization UNESCO (1998), it is reflected in article 10: “An essential element for higher education institutions is an energetic staff training policy.” Precise guidelines must be specified in reference to the professors of the university level, in order to build spaces in the discussion room, increasing processes for ceasing to be only recipients of scientific knowledge that can be generated in the classroom.

Bennis and Namus (2014) argue that:

... Teacher training is characterized by being an activity where communication tends to suffer severe interference due to the lack of communicative development evidenced by teachers, manifested in the low oral and written production, in the same way, the poor development of cognitive processes is observed repeatedly, low levels of reflection and deficiency to consolidate creative thinking and little attention from institutions to teacher training, preferring to invest in didactics (p. 154).

In other words, there is no constant teacher training, where the educational process loses the horizon and becomes a routine act, knowledge does not occur, research is not essential for the formation of the professional future; these shortcomings presented by the teacher, coupled with this lack of leadership because his activity is only limited to impart knowledge and not as a guide through which attitudes and behaviors are modeled.

In this way, the university teacher must be a leader; as Robbins (2014) puts it as: "The ability to influence a group to achieve their goals". (p. 347). This indicates that the teacher is a decisive element in the educational task because he urges students to learn and think in terms of solving problems of daily life.

On the other hand, the article is based on the qualitative paradigm, the phenomenological-hermeneutical method. With the selection of the (5) key informants of higher education. Information was collected through the in-depth interview, emerging categories such as: leader university teacher, humanist pedagogy, leadership, student, higher education and fifty-nine (59) subcategories. Finally, the article was structured in four moments: the introduction, a theoretical section, the methodology, and the findings.



Epistemological vision of transformational leadership and humanist pedagogy

The importance of leadership in the direction of human affairs is universally accepted. There is no possibility that an organization or society will survive long without leaders. The leader is the one who influences other people, a leader is an individual who guides others towards a common goal so that everyone feels involved in the whole process. A leader is the one who moves forward to meet the goals of a given project. For its part, leadership is any capacity that a person has to influence a group of people in order to obtain commons.

Talking about leadership has been a source of interest for several authors, which is why they have raised a series of concepts, authorities such as Bennis and Namus (2014) consider that leadership "is one of the most observed phenomena on Earth and one of the least understood" (p. 4). To the extent that time has passed, the heroic conception of leadership has been challenged, by the social dynamism in which the human being develops due to the prevailing challenges or in organizations as in societies.

In this way, talking about leadership is a relationship where leaders and those who follow them, urge to make transformations that will affect real changes that are reflected in the purposes to follow. According to Daft (2011) leadership:

... implies influence, occurs among people, they intend to make important changes and these reflect the purposes shared by leaders and their followers. Influence means that the relationship between people is not passive. However, this definition also implies the concept that influence can follow many paths and that it is not coercive (p. 89).

In addition, it is a person-to-person activity and is not like administrative paperwork or activity planning. Leadership occurs between people; that is, it is not something that one party does to another. Since leadership concerns people, there must necessarily be followers. Daft (2011) argues that: “good leaders know how to continue and, thus, they are an example to others” (p. 67). The question of intention or will means that people, both the leader and his followers actively participate in the pursuit of change that will lead to the desired future. Each person assumes his personal responsibility to reach that desired future. People assume their personal responsibility to achieve the objectives. It should be noted that leadership is a reality where the leader and his followers share responsibilities in order to achieve their objectives.

232



Transformational leadership

The book *Leadership* by James McGregor Burns began the approach of transformational leadership, where he explained that the leader takes care of small details until values and meanings are formed. In this way, the transactional leader, as a great explorer, whose purpose is to transcend to new approaches that urge people to achieve their goals.

On the other hand, Burns (2013) explains:

Leadership is exercised when human beings who have certain motives and purposes are mobilized, in competitions or in struggles with others, institutional, political, psychological and other resources, to awaken, compromise and satisfy the motivations of the followers (p. 213).

Likewise, he affirms that leadership is distinguished from power, where needs and objectives are interwoven with each other. This political scientist maintains that transformational leadership occurs when people

relate to the point that they commit themselves to be motivated by exalting the morality of each one who intervenes.

On the other hand, the types of leadership allow establishing different characteristics such as: exalter, lifter, exhorter, among others. However, this leadership has a moralistic tendency when those who participate have ethical aspirations of the one who directs and is directed, which has an impact on themselves.

In this way, Lussier and Achua (2011), express that: “transformational leadership serves to change the state of things by articulating with the followers the problems in the current system and an attractive vision of what the organization could become” (p. 165). Bass and Abolio (2012), proposed that transformational leadership is composed of four dimensions of behavior and referred to them as the four “I”: idealized influence, inspirational motivation, individual consideration, and intellectual stimulation. The four I have been used in other disciplines and cultures to explain the transformational relationship between leader and follower.

The transformational leaders, according to Lussier and Achua (2011), understand that: “... In order to make followers contribute fully to the transformation process, you have to strengthen decision making and offer support to do things” (p. 132). In this way, creativity is encouraged, challenging followers to think and rethinking how activities are carried out, encouraging motivation, reinforcement, and behavior of those involved.

Likewise, transformational leaders have a perspective to follow, consolidated with respect and horizontal communication promoting intelligence, the rationality that leads to individually respond to prevailing situations. Bass and Abolio (2012) define the transformational term as: “the leadership that leads to the modification of the organization, company or university” (p. 12). However, Kouses and Posner (2014) suggest that transformational leaders urge others to improve in the various fields, stimulating ways of thinking, inducing the proposed goals.

Humanist pedagogy

Pedagogy as science and art has become a complex reality, in this regard, Luzuriaga (2015) states that:

Pedagogy is an art, a technique, a science and even a philosophy. On the other hand, sometimes it has been given a descriptive character, limiting it to the study of the phenomenon of education, of educational reality, and others have been assigned a normative value, having to determine, not what education is, but what must be (p. 132).



Each one of these considerations permeates and opens the range of new perspectives to the educational task from different axes. Therefore, pedagogy according to Whitehead (1965) cited by Touriñán (2019):

... A naturalistic vision in which, from the incipient freedom of the student, a self-perfecting discipline would arise that would lead to moral freedom, the freedom-education relationship realistically demands rhythmic demands of freedom and discipline, demands a peculiar rhythm that forces the educator to dose their influence on the incipient freedom of the student, according to the degree of development of the provisions of the student (p. 251).

Taking into consideration the above, it extends into a movement that collects interrupted and rejected stories and cosmogonies, while adventuring horizons friendly to human life. Looking at the oppression, it names the colonial marks and strips a specific, precise and close way of power in history. On the other hand, in the critical pedagogy of Ramallo (2019):

As we mean in this enunciative act, it shares the vocation for epistemic-political agency from the exposure of the conditions of oppression and the complicity of social institutions in the perpetuation of coloniality and normalization (p. 222).

What happens is that although education is a unique, unmistakable and permanent reality of human life, it is conditioned by diverse factors: historical situation, philosophical conceptions, vision of life and the world, scientific progress, social, political and social activities. Here arise the various interpretations of pedagogy.

Following the approach of Luzurriaga (2015) and affirming that: “pedagogy is an art, a technique, a theory, and a philosophy, in summary, essentially pedagogy is the science of education” (p. 67). Pedagogy studies education in its various social and individual aspects, therefore, it proposes certain norms or purposes, in this way, it is profiled in determining: how should education be? Thus, education is a normative science in which rules and laws are applied. In conclusion, pedagogy is an historical science.

Methodological references

Research has traveled a long way in the search for the human essence, it was developed under the qualitative paradigm whose goal is the description of the phenomenon and where a part of reality can be understood. In the educational field, teaching is currently conceived as a



research activity and is in turn as a reflective process carried out by the teacher in order to improve the educational practice. La Torre (2013) expresses that teaching ceases to be a natural phenomenon to become a social and cultural phenomenon, as well as a complex social practice and interpreted by teachers.

Regarding the research method, this work was framed in the phenomenological method of the qualitative paradigm. Phenomenology arises in contemporary philosophy under the influence of existentialist thinking. Expresses Barragán (2014), phenomenology as: “method aims to reach an intellectual vision of the object through intuition. Intuition always makes preference to what is immediately given, to things” (p. 90). Phenomenology starts from the total fact of human knowledge. Its interest is to make a description of the phenomena or facts of knowledge as can be seen in the immediate experience.

The phenomenological method studies the experiences that are often difficult to observe and communicate, where the methodological process involves determining similar cases by discovering them and developing a representative organization of those experiences (Martínez, 1989).

Following this line of the qualitative paradigm and with a phenomenological method, the research was carried out in the interpretive-hermeneutical approach. Hermeneutics develops in postmodernism, understood as a philosophical current with a skeptical cultural version, is presented as a reaction to the postulates of modern epistemology, giving an interpretation of cultural symbolism that present social reality.

In the phenomenological-interpretative approach two aspects are integrated: the interpretation and study of phenomena (phenomenology), as they are experienced and lived by man and studied as they are, with a certain intuition of correspondence or not a reality. Regarding the educational process, Alfaro (2015) explains that the interpretative approach has originated a series of methodological orientations linked by a common epistemological approach to education whose objective is to understand the teaching and learning processes from the perspective of the participants, in such a way that the identification of the factors that support teaching and communicative activity to influence it is achieved. From the methodological point of view, it is developed in the observation of the participants, the in-depth interview and triangulation, as well as the case study and the content analysis.

This study was classified within the field research, the data was extracted directly from the object of study, to later unveil, interpret and discover its reality. In the field research, the natural object is the human



being and his actions, therefore, is to study the phenomena in their own context, because that is where reality occurs. According to Hernández, Fernández and Baptista (2010) it is based on the field research modality that is defined as: “the systematic analysis of problems in reality” (p. 37), in order to describe, interpret, understand why the phenomenon occurs, determining the causes and consequences. Based on the above, the present study compiled the data directly from reality, which was represented by teachers.

In this process of subjective interaction where the researcher does not assume the position of an external investigator who is limited to seeing the manifestations of such acts but interprets what the research subjects mean by their actions. Through this intersubjective understanding process, the social actors selected from this research correspond to five teachers of the Master’s Degree in Quality Management in the Distance Education Program of the Miguel de Cervantes University.

In turn, the process of categorization, analysis, and interpretation that emerged from the context itself, leading to the formulation, theoretical reconstruction that, according to the author, represents an arduous work of theorization, consisting of discovering, confronting, differentiating, adding, ordering, establishing links, unveiling categories and relating them to each other. As Taylor and Bogdan (1994) point out, most of the qualitative studies are geared towards the development of a sociological theory whose purpose is to understand or explain features of social life that goes beyond the studied people and scenarios, since the researchers actively point out those elements, actors, and conditions.

Interpretation of knowledge

The reality is interpreted in the research scenario and it is convenient to recognize the unprecedented of these interviews from the daily life of the teaching wisdom, manifesting experiences, memories, anecdotes transmitted by these key informants. It is necessary to highlight the disposition of the informants and show their role as leaders and humanitarian educators for several decades in this university world.

As for the in-depth interview, a script was prepared and applied on a daily basis, to avoid any bias of the key informants, once the information was obtained, we proceeded to weigh and categorize according to the objectives of the investigation. The categories of interpretation were unveiled as a structure of significance. Among them: leading university



professor, Humanist Pedagogy, Leadership, Student, Higher Education. Regarding the interpretation of the researcher, regarding the categories, a philosophical position was assumed that unraveled the imaginary configuration of the experience lived by the social actors linked to the academy in the teaching knowledge.

The first category: Leader university teacher from which the following subcategories emerge: The teacher-leader is the one who assumes being responsible, integrates, guides and represents the needs and interests of those who make up the group to attain the established goals. There are many teachers who have all the skills and abilities to be authorities in the university, department heads, and deans.

Researcher: the teacher merits to be a researcher to handle updated content and improve performance in the academic area. One of the obstacles that has arisen in teaching is that teachers are anchored in outdated content and in a tradition. As stated by Tapia (2010), all professions with a certain intellectual weight there is research. In teaching, this habit is not yet sufficiently rooted. The teacher has to deal with the creation and application of innovations aimed at renewing processes and results.

Talent training: a quality of the teacher-leader is the training of talents that graduate from the university campus. He substantially contributes to the development of the country, and strengthens the mission of the university by training students in his area of study, as well as incorporating the integral training component.

Humility: for a teacher-leader one of the greatest virtues is humility. Since this academic career has to go through studies of IV and V level, the more you understand the vocation to serve and giving oneself for the student greater spiritual prosperity one will get as a human being. Today the teacher is a complement of competitiveness, theoretical domain, forgetting that when a teacher becomes a simple person many students end up admiring this quality.

Teaching vocation: a teacher without vocation is similar to the thought of the liberator Simón Bolívar "A being without study is an incomplete being", it is the deontological and axiological path in teaching, it is a call to serve in the classroom with devotion, achieving the personal transformation of students. As expressed by Pérez, (2005) teaching is a continuous activity of stimulation or impulse of attitudes, orientations, and ideas that allow students to progress as human beings, grow, in their attitude and range of abilities.

Master: this word has a discursive representation of respect, such denomination in the teaching activity is represented by a title where the



student admires the figure, and distinguishes it similar to that of a parent. Tiba (2010) argues that being a teacher is a consecrated function in the classroom: it consists in being the source of information and responsible for the establishment of order in the group. The teacher exercises that function without using his position or his power, has recognized authority in his apprentices. Teachers have students who are there by obligation; the masters, on the other hand, have disciples, who follow them because they want to be their apprentices.

Masters are needed, says Pérez (2005), there are many professionals in the area of education, but few induce the process of ethical training, exalting lifestyles and ways of understanding human life, permeating the rupture of persistent situations that entail making life a routine cycle.

Empathy: is the ability to connect teachers and students in the same direction, favoring the educational process. That is, the needs and feelings of the student conglomerate are identified and given assertive answers. Pérez (2005) explains the empathy that implies emotional intelligence, where the position of others is assumed, as well as the feeling and thoughts.

Cognitive domain: it is a characteristic of the teacher-leaders that represents the mastery of the content taught and strengthened during the student's learning process. In relation to this, Zabalza (2012) states the following: "Formation is not a punctual process that takes place during the years of the study, but a progressive itinerary that goes through different phases and continues, as the name implies, throughout life" (p.13).

Charisma: the term comes from the Greek word charisma which means a gift of divine inspiration. The sociologist Max Weber cited by Lussier and Achua (2011) considered the word charism based not on authority, but rather on perceptions of the followers, that a leader is endowed with the gift of divine inspiration or supernatural qualities. Transferring this reality to the educational field, one can ask the following questions: What memory does an excellent teacher leave? What are the essential characteristics of the teacher? Why do they leave an indelible mark on the student's psyche? The traits that were linked to the personality of these excellent teachers-leaders, and not because of the discipline they imparted, but because of their personality in the educational environment, they frame a charismatic gift with their students that allows them to listen, admire and be emotional.

Diversity and plurality of teaching: a teacher has to educate from a pluralistic and ecumenical perspective not under a religious dogma or a political ideology. The university, as its name says, is a universe and is not



a parcel or sectarian world. The teacher must respect the creed and political and economic affinity of his students and not impose ideology, much less his beliefs in the classroom. For his part, Casares (2011), expresses that the university has a cultural contribution that transmits, explicitly and implicitly, social values and messages to its students about issues with government authorities, academic performance, peer relationships.

Professional ethics: another characteristic of the teacher-leader in his role as a promoter in the human values of his students. He demonstrates the personalization of virtues and presents impeccable behavior in his pedagogical actions. No profession is understandable from the lack of ethics but in education our responsibility is twofold: it affects us educators and those who forge an autonomous self-consciousness. How to educate on the value of justice if we do not have the same assessment criteria with all our students?

Integrity: a teacher-leader educates students not only with master classes but by living what he teaches. He is a person who balances his personal profile with the professional. From the point of view offered, it is to be consistent between what it is said and what we do, between what we say is going to be demanded and what is really evaluated.

The category: Pedagogy as an art based on the theoretical, technological and axiological elements allows the interpretation of educational praxis as a process of formation of the human being, during all his life, man has been immersed in the educational work.

Personal value: Humanist pedagogy has as its essence the rescue of the humanization of the educational process over technological, cybernetic and other changes. The student becomes the axis of departure to transform the university. In this way, the talents and other potentials of the human being are exalted, managing to communicate creatively.

The wellbeing of the human being: Humanistic pedagogy as a goal seeks to enhance the experiential process of the human being, achieving all its potential from a holistic vision. Pérez (2005) argues that “education implies a task of liberation, of the formation of free, solidary and communitarian people” (p. 65). Consequently, the human being is formed from his various perspectives.

Strengthening of human relationships: Education is a process in which students are taught to lead excellent interpersonal relationships. Classrooms are called to be spaces of harmony and fraternity to achieve an empathic civilization. On university campuses, one of the advantages of humanist pedagogy is human relations. The student identifies with the



teacher who shows positive citizen values and attitudes in an environment of respect.

Human values: Education as a formative process from initial to higher education focuses on the formation of human values presented in the curricula from the transversality of the subjects. In the face of a world with a mechanistic-robotic tendency (artificial intelligence) it is necessary to turn the human being with its complexities and successes. Day (2012) expresses that human values, such as justice, honesty, affection and practical wisdom, are a necessary condition of teaching.

Formation of citizens: In a country with a framework of democracy is indispensable to train citizens who are aware of the basic issues impacting their country. Decades ago, there was a subject in seventh grade called moral and civic training until it disappeared from the education system.

Spirituality: to understand that humanistic pedagogy is among the sciences of the spirit (as the Socrates, Plato, and Aristotle claimed) and not as a factual science, nowadays it is inevitable to turn towards a more human world and not look exclusively at the material.

Comprehensive curriculum: are the academic guidelines that guide the formation of the human being as the result of all educational work, highlighting the integrality of the student. The word curriculum exalts the process to develop in the human being its potentialities and abilities.

Transversality of content: the university curriculum from the humanist pedagogy is developed in the UNESCO proposal of Jacques Delors (1996) of the domains: learn to know, learn to do, learn to live together, learn to be, within with the transversal axes of academic programs. These changes allow to harmoniously achieve the integral personality of people in the context in which they are imbued.

Personal development versus professional development: in the university centers the myth of the division and the belief that the professional development component is superior to that of personal development has to be broken. In the end, the student has to go to the labor market with citizen values, in full self-development, with effective communication, with leadership exercise and a critical and constructive vision of the country.

Integral orientation: this constitutes the cornerstone of humanistic pedagogy in which the student is formed in personal growth and development with all their strengths and weaknesses. Also, discovering the elements that form his personality (beliefs, paradigms, values, attitudes, temperament, skills, talents).



Self-development: the educational curriculum must strengthen in the student his growth in his personal profile emphasizing the recreational, sports, artistic, cultural and above all the humanitarian. Pérez (2005), says: "... it is not enough to educate all people but you have to educate the whole person" (p. 45). Traditional education involves the memorization and repetition of the contents that the teacher poses every day in educational encounters.

Emotional intelligence: from modernity education was subject to the paradigm of rationality systematically forming the cognitive man (rational, logical), but since 1990 an emerging theory called emotional intelligence emerges. Pedagogy as a process of transformation of the human being does not escape from training the student in his emotional dimension. Day (2012) defines emotional intelligence as: "the ability to remain motivated and persist in the face of frustrations; to control the impulses and delay gratification, to regulate humor and prevent negative stress from stifling the ability to think; of empathizing and maintaining hope" (p. 78).

Conflict management and resolution: in a polarized and asphyxiating Venezuelan society regarding the political climate, universities must become mediators of both sides. At all levels of education and primarily at the higher level, strategies should be drawn up to train university students in conflict management and resolution. Pérez (2005), explains that physical or verbal abuse leads to demystifying social coexistence.

Study techniques: they are methodical processes of how to adapt and learn to study in the first semesters, however, this subject has disappeared from many curricula, under the criterion that it is not important for the areas that form engineering. One of the realities that are evidenced in the institutes of higher education is that the new students, in the first semesters do not have study habits or an effective methodology to pass their evaluations.

Community service: is the direct link between the university and the community, with work coordinated by assignments where the student provides expertise to neighborhood organizations in a sector of the city. Education has become a compendium to fulfill the task of humanizing and leaving the university campus in search of the knowledge of the communities.

Roll of the teacher: it is the transforming agent of humanist pedagogy, that is, it is who directs the melody in the classroom with the baton. It is important to emphasize that the teacher-student relationship has to have a harmonious balance, with the teacher displaying the sta-



bility of the educational process and focusing the student on personal transformation.

Student motivation: a humanist pedagogue never fails to motivate, stimulate proactivity and encourage the student to learn and feel valued in each subject. Motivation is the foothold for actions. This does not mean that without motivation nothing can be done, nor that it is enough to want to be able to do. Usually, with motivation you go further. Motivation leads to overcome the various situations that afflict the human being in order to allow the achievement of the goals proposed by the respective instances.

Individualized consideration of the student: each person has their own personality and each student has strengths, weaknesses, talents, and difficulties in which they deserve to receive particular guidance to improve their academic performance.

Academic quality: it is the process of academic excellence that is developing in favor of improvements and strengthening proactivity in teachers and university authorities. From the perspective of teachers' educational performance (academic quality) and the achievement of their professional objectives. Not all students are equal and the success of the educational action is not that everyone reaches a certain level of academic and ethical-social excellence, but that each one fully exploits their innate potentialities.

University transformation: It is the process of continuous improvement in universities, breaking the status quo and traditional policies to open up to innovation, technological growth, research and especially the humanistic. López (2010) states that "innovation should not be considered as a process of aesthetic, external change, but also as an internal transformation of all the agents involved in the teaching and learning process" (p. 23).

The leadership category shows the following subcategories.

Every leader must watch over and guard his followers, that is, without followers, there are no leaders, many times the leaders forget this titanic mission to protect their companions.

Responsibility for their followers: Luissier and Achua (2011) argue that "effective leaders influence followers to think not only of their own interests but also of the organization through a shared vision" (p. 56).

The achievement of the objectives: the process of inducing others to achieve a common goal becomes the essence of leadership, a leader without objectives or vision has an expiration date, the leader must meet



his goals covered in the strategic thinking (vision, mission, organizational objectives, values) of the organization.

People Management: directing people is not an easy task since each human being has a personality full of many interests and complexities. The mission of the leader is to look for each follower to accomplish his task and obtain results, otherwise, he would be wasting resources and time in the organizational production process.

Resource management: every leader must manage both tangible and intangible resources where he manifests, in his exercise of leading, his effectiveness, efficiency, and effectivity through the traditional processes of scientific administration (planning, organization, direction, control). Munch (2011) states: "... it is of no use to an organization to have a large amount of material and technological resources if managers do not have the capacity to coordinate and guide the efforts of staff to obtain quality and productivity in the achievement of objectives" (p. 35).

Knowledge: the leader has proven competences in his work area (focused on the task) and his complement is the excellent management of interpersonal relationships (focused on the people in the organization), this union is the perfect combination to carry out the action of leading.

Professional commitment: one of the key values in the exercise of leadership is commitment, if a leader does not get involved in his function and does not assume it with professionalism, the action of leading is heading towards failure. The leader is who directs the company, the classroom, the educational institution; is essential that their actions derive from their responsibilities with the changes and achievements of the organization.

Leader in a diversity of contexts: the leader has to be linked in various facets of life, not only in the organizational ones but also has to involve family relationships within his work context. A leader has to perform his duties both at work and at home and in this lies the success and growth of his personal fulfillment. Leaders need to be balanced since their harmony will give rise to the driving force that helps others.

Maestro (2009), defines that the most important role is the personal (physical, intellectual, social, spiritual, emotional) since it is necessary to take care of oneself to be well, to the extent that we are well with ourselves we can offer it to others and other roles. Identifying and being aware of the roles is a great step, this means that quality time needs to be dedicated to developing and enhancing each of the roles with which we are committed.





Stimulus to success (motivation): to fully fulfill the role of the leader, it is necessary to have the motivation to succeed imprinted in the soul, the difference that marks between a leader and another person is the push to achieve success, that is to say, are people who do not rest or surrender in order to achieve the objectives. Precisely, Munch (2011), makes the distinction between a leader and a manager, implies that the leader is followed because he leads to becoming thoughtful, socializing, committed, confident, while the manager, only drives the workers. In simple sentences by Nietzsche “He who has a reason to live can bear almost any means of living”.

Effective communication: the leader must be a great communicator framed in the achievement of the objectives; it is of no use if the leader has a great vision but is incapable of transmitting it correctly to his followers. The leader has to develop empathy with his disciples by providing assertive communication.

The persuasion of the leader: it is the process where the leader instead of using authority, is assertively seeking that his followers buy-in his ideas.

Consensus decision making: the leader must focus on making democratic decisions, where everyone involved participates to make the best decision of the group. Decisions should not be led by a leader in an authoritarian and vertical manner but should emphasize the horizontality of ideas to take it to action.

The student category, raises the following subcategories:

The student is the nerve center of educational work, where everyone is equal and seeks the achievement of meaningful learning. Managers, teachers, administrators and workers, programs, distribution of schedules, times and spaces, activities, all must be at the service of students.

Center of education: the university curriculum and all the educational policies that develop this sector must have as a center the “student”, if the educational orientation is directed to another front of the university community, the duty of higher education would be lost. The vitality and the air that enriches the university centers is the presence of the students (raw material of the educational system), without them the presence of the teachers would not be necessary for the teaching function.

The educational quality requirement of teachers: teachers have the mission of educating, training, teaching, instructing, orienting, among other pedagogical activities, however, the quality of the teacher is what deserves to be developed to achieve the transformation of their students. In recent years, there is evidence of the approach of professionals who

seek to enter teaching, without having pedagogical knowledge or experiences in the classroom.

Constant learning: the student during his undergraduate and postgraduate career never stops learning due to the dynamism of the information. Being in a classroom goes through different subjects and pedagogical models of each teacher, learning becomes something dynamic and constant where the student is preparing for their professional field.

Commitments to goals: when a university student begins to have a good academic performance, he becomes more committed to his goal of graduating and becoming a great professional. Pérez (2005) explains that: “success demands effort, perseverance, courage. The teacher must help students achieve the goals they want, overcoming the difficulties that arise.

Personal growth: it is the evolutionary process in which the human being grows as a person from a holistic and experiential perspective. Upon entering university life, the student dedicates a five-year period of his life to it, and at the end of the career, the student’s growth and development are evidenced.

Formation of maturity: university education accelerates the process of maturity in the students, leaving behind, during the first semesters, the residues of adolescence (immaturity) and beginning to configure their personality with a nuance of greater balance and aspirations of his life.

Happiness: it is the moment of exaltation of the human being to feel fulfilled with himself and with others. The student life presents moments of joy, vivacity full of enthusiasm for his university daily life.

Dreams, transformations, enthusiasm: when students enter university, they are full of utopias, long-term visions of the progress of their university career generating transformations and accumulating knowledge that enthusiastically leads them to be great professionals. Pérez (2005) explains that the word enthusiasm etymologically means “to have a god inside.”

Progress of the country: at the rate as higher education is progressing, the country develops, as a product of improving the national productive apparatus and, with research, innovation and technological and cyber changes that make the country an international reference.

Educational status: due to the clustered nature of education and the vertiginous increase in studies (doctorates, postdoctoral degrees, masters, and specializations), teachers have acquired status within civil society, serving as researchers (innovation) and agents of the economic,



social and political changes that countries deserve. La Torre (2013) comments that man has different needs and through education, he manages to meet them.

Teaching pedagogical growth: the pedagogical action carried out for more than one or two decades has taken a turn in the professionals (engineering, social sciences, legal sciences) graduated from university and polytechnics who have joined teaching as a second exciting career, exercising a didactics that transforms students from the theoretical and practical perspective of knowledge acquired through their personal and professional experience.

Preparation for the labor market: the real function of the university is to convert graduates into high-quality professionals for a globalized world, where academic preparation and their personal profile prevail over other demands of labor activity. López (2010) explains that “universities must go beyond the purely instrumental vision that higher education traditionally has had, considered as the obligatory way to achieve certain goals (titles, economic advantages, acquisition of status)” (p. 78).

Self-improvement and development of the human being: higher education seeks for the student to achieve his goals and personal fulfillment, not only to obtain a professional license but to become the sustenance to form a family. Tiba (2010) express that thanks to higher education, the full development of the capabilities of man is achieved, which otherwise would not be easy to achieve. While, at the same time, the integration of each human being is intended.

After having processed and analyzed all the information that emerged from this heuristic process, the next stage is represented by the theoretical construction, since it constitutes the substantive contribution made by the qualitative researcher.

For its part, a conceptual resignification explains that the university teacher, through transformational leadership, creates a positive synergy and the enabling environment for the work of teaching and learning to reach their highest levels. It has the obligation to look for the different paths that each type of intelligence follows to construct knowledge; therefore, the teacher assumes an active posture and does not routinely repeat the same ideas, nor follow the same mental processes, but explores until he finds each person's way of learning. The teacher-leader is committed to his work having favorable expectations of the dispositions and attitudes of his students. He never fails to demand what the student can achieve by his own means, but facilitates the channel to reach the most suitable path. From the axiological, ontological and teleological perspec-



tive, the common factor that lies in the excellence of humanist teachers is their passion for the success of all their students.

A deep theoretical account regarding leadership was made. Kouses and Posner (2014) developed a theory called leadership and followers, which belongs to the transformational approach. According to these authors, the leader is the person who can change and transform the institutions.

Therefore, the author, from everyday life, conceptualized leadership, as the exercise that manifests the ability of the leader to take responsibility for his followers, seeking the achievement of objectives through the management of people and resources, through the use of knowledge and persuasion. Demonstrating a professional commitment to the diversity of contexts, through effective communication, stimulating the success of his followers and making consensual decisions.

In harmony with everything stated in these lines, I theoretically build the conceptualization of the student as the center of education and the meaning of all pedagogical actions, which demands the educational quality of teachers in order to develop constant learning. They are committed to the goals obtaining personal growth that consolidates their formation as a product of their maturity. Which is synonymous with the happiness of *eudaimonia*, which Aristotle called the academic journey that fulfills dreams and transformations, full of enthusiasm.

Likewise, universities have been guarantors for centuries of the traditional functions associated with progress, the construction of knowledge and the transmission of knowledge, endorsing concepts such as research, innovation, teaching, training, continuous education.

Starting from the reality described above, we seek to reform the training proposal since it is still rigid, expired, out of date, and in it, the teaching units are static, while the curricula are very specialized and the training appears in a fragmented form. All these circumstances have led to the case studies being at a crossroads of the distrust that they inspire within society. However, it depends on actions that such a negative image can be changed to a much more positive one, in which other types of structures, methodologies, projects, regain confidence in higher-level educational institutions are established.



Final considerations

The teacher-leader from a humanistic approach must be seen with exceptional attributes and qualities to achieve a process of transformation in teaching, based on his personality and rescuing the figure of the master, represented in professional ethics. As an integral part of the educational system, the leader must open the horizon, dare to challenge the traditional status quo that blind educational progress.

For the development of a humanistic pedagogy, the formation of education for the human being is necessary, where an integral curriculum is involved promoting theoretical, practical knowledge, dialogicity, self-knowledge. In turn, the continuous improvement of the teaching role, allowing a more horizontal academic vision and minimizing the authoritarian verticality imposed by many educators. To teach is not enough just to know, there must be a compromise between the teacher and the student so that the latter apprehends what is taught in the classroom.

Leadership is made, constructed through personal excellence. In these postmodern times, the construction of leadership becomes an arduous and tenacious task, but education needs many leaders in the study centers to be able to transform the outdated, expired reality and adapt it to the new challenges of society.

Finally, the theoretical approach of transformational leadership from the perspective of humanist pedagogy provides an alternative to higher education in the search for new ways to train an integral, ethical, conscious and citizen committed with their social reality.

Bibliography

- ALFARO, Manuela
2015 *Evaluación del Aprendizajes*. Caracas: Editorial FEDEUPEL.
- BARRAGÁN, Miguel
2014 *Epistemología*. Bogotá: Editorial Santo Tomas de Aquino.
- BASS, Bastudas & ABOLIO, Balir
2012 *Liderazgo Transformacional*. New York: Editorial Harper.
- BENNIS, Warren & NAMUS, Burt
2014 *Liderazgo: La Estrategia para hacer los Cambios*. New York: Editorial Harper.
- BURNS, James
2013 *Liderazgo*. New York: Editorial Harper.
- CASARES, Darío
2011 *Líderes y educadores*. México: Limusa.
- DAFT, Raúl
2011 *La Experiencia del Liderazgo*. México: Editorial Thomson.



- FRABBONI, Fabián
2011 *El Libro de la Pedagogía y de la Didáctica*. Madrid: Editorial Popular.
- HERNÁNDEZ, Roberto, FERNÁNDEZ, Carlos & BAPTISTA, Pilar
2010 *Metodología de la Investigación*. México: Editorial McGraw-Hill Interamericana. 4ta Edición.
- KOUSES, James & POSNER, Barry
2014 *El desafío del liderazgo*. Buenos Aires: Editorial Granica.
- LA TORRE, Soler
2013 *La innovación como proceso de cambio educativo*. Madrid: Ediciones Narcea.
- LÓPEZ, Fernando
2010 *Metodología participativa en la enseñanza universitaria*. Madrid: Ediciones Narcea.
- LUSSIER, Robert & ACHUA, Christopher
2011 *Liderazgo: teoría, aplicación, desarrollo de habilidades*. México: Editorial Thomson. IV edición.
- LUZURIAGA, Luis
2015 *Pedagogía*. Buenos Aires: Editorial Losada.
- MARTINIC, Jerez
2010 Liderazgo transformacional un acercamiento al liderazgo de servicio. Propuesta de un modelo centrado en principios. *Revista de la Universidad Peruana Unión*, 1-23.
- MARTÍNEZ, Miguel
1989 *El paradigma emergente*. España, Barcelona: Editorial Gedisa.
- MUNCH, Lurin
2011 *Liderazgo y Dirección*. México: Editorial Trillas.
- PÉREZ, Esclarin
2005 *Educación para humanizar*. Madrid: Ediciones Narcea.
- RAMALLO, Francisco
2019 La (re)invención del pasado como gesto de (des)composición de la Pedagogía. *Sophia, colección de Filosofía de la Educación*, 27(2), 217-236.
- ROBBINS, Esteves
2014 *Liderazgo emocionalmente inteligente*. México: Editorial McGraw-Hill Interamericana.
- SÁNCHEZ, Gerardo & JARA, Jimena
2018 Habilidades asociadas a la docencia. Fijando posiciones de profesores en formación. *Sophia Austral* (22), 247-269.
- TAPIA, Lure
2012 *Gerencia del conocimiento universitario*. Caracas: Editorial Rectorado UPEL-Caracas.
- TAYLOR, Steve & BOGDAN, Robert
1994 *Introducción a los métodos cualitativos de investigación*. España, Barcelona: Editorial Paidós.
- TEPPA, Sebas
2012 *Análisis de la información cualitativa y construcción de teorías*. Barquisimeto: Editorial Gema.
- TIBA, Ilka
2010 *Enseñar aprendiendo*. México: Aguilar Fontanar.



TOURINÁN, José

- 2019 La relación educativa es un concepto con significado propio que requiere concordancia entre valores y sentimientos en cada interacción. *Sophia, colección de Filosofía de la Educación*, 26(1), 223-279.

UNESCO

- 1998 Declaración Mundial sobre la Educación Superior en el Siglo XXI: Visión y Acción y Marco de Acción Prioritaria para el Cambio y el Desarrollo de la Educación Superior aprobados por la Conferencia Mundial sobre la Educación Superior.

ZABALZA, Miguel

- 2012 *La enseñanza universitaria. El escenario y su protagonista*. Madrid: Ediciones Narcea.

250



Document receipt date: May 30, 2019

Document revision date: July 20, 2019

Document approval date: September 15, 2019

Document publication date: January 15, 2020

THE ECUADORIAN CRISIS OF AESTHETIC REPRESENTATION
FROM THE SECOND HALF OF THE 20TH CENTURY
TO THE BEGINNING OF THE 21ST CENTURY

Crisis de la representación estética ecuatoriana
desde la segunda mitad del siglo XX
hasta comienzos del XXI

PABLO EUGENIO CABRERA ZAMBRANO*

Pontificia Universidad Católica del Ecuador, Quito

pcabrera406@puce.edu.ec

Orcid code: <http://orcid.org/0000-0002-4650-8497>

Abstract

This paper analyzes how Ecuadorian art has three features that characterize aesthetic experiences from the mid-20th century to the present. 'Imposition', because esthetic models that define the production of artistic expressions are transferred without qualms; 'Domain', because this taxing and multifunctional influence is considered preferable in social, cultural, artistic and academic spaces; 'Exclusion', given that there are expressions that are considered inoperative in this dominance and are excluded. This situation comes from the paradigm of postmodernist 'aesthetic samples', conceptualists of neo-Marxist ideological tendencies. This mixture applied to aesthetics and art in Ecuador, has imposed a regime that is guided by the 'high culture' and practices of 'cultured art' associated with curatorial achievements, has caused confusion and instability in the production of artistic expressions; not only those involved in this model, but also those who do not submit to it. In this inquiry sources are consulted at the national and international level and the two features stated in questioning are explored with the theories and ideology that support the aforementioned paradigm, for an interpretative one with three complementary instances. The first refers to the aesthetic paradigms and from which Ecuadorian contemporary art derives; the second, on the axiom of the 'aesthetic samples' and the agency in the artistic expressions. The conclusion states the limitations, openings and results to assign options to the current state of art and the alternative diligence represented by the Andean philosophy for overcoming the Ecuadorian aesthetic crisis.

Keywords

Aesthetic paradigm, artistic expressions, Andean philosophy.

Suggested form of citing: Cabrera, Pablo (2020). The Ecuadorian crisis of aesthetic representation from the second half of the 20th century to the beginning of the 21st century. *Sophia, colección de Filosofía de la Educación*, 28(1), pp. 251-274.

* Doctor of Philosophy, Aesthetics and Art Theory. Master in Culture Studies. Higher Diploma in Cultural Studies and Cultural Policies. Architect. Professor at the Pontifical Catholic University of Ecuador, Quito.

Resumen

El presente trabajo analiza de qué manera el arte ecuatoriano tiene tres rasgos que caracterizan las experiencias estéticas desde mediados del siglo XX al presente. 'Imposición' porque se transfieren sin reparos modelos estéticos que definen la producción de expresiones artísticas; 'dominio', debido que ese influjo impositivo y multifuncional se considera preferente en los espacios social, cultural, artístico y académico; 'exclusión', en vista que existen expresiones que se consideran inoperantes en esta dominancia y se proscriben. Esta situación proviene del paradigma de las 'muestras estéticas' posmodernistas, conceptualistas de tendencia ideológica neomarxista. Esta mezcla aplicada a la estética y al arte en Ecuador, ha impuesto un régimen que es encaminado por la 'alta cultura' y las prácticas del 'arte culto' asociadas a los alcances curatoriales, ocasionado confusiones e inestabilidad en la producción de las expresiones artísticas, no solo de los involucrados en este modelo, también en los que no se someten al mismo. En esta indagación se consultan fuentes a nivel nacional e internacional y se exploran los tres rasgos enunciados en interrogatorio con las teorías e ideología que sustentan el referido paradigma, para una interpretativa con dos instancias complementarias. La primera, se refiere a los paradigmas estéticos y los derives en el arte contemporáneo ecuatoriano; la segunda, sobre el axioma de las 'muestras estéticas' y la agencia en las expresiones artísticas. La conclusión enuncia las limitaciones, aperturas y resultados para asignar opciones al estado actual del arte y la diligencia alterna que representa la filosofía andina para la superación de la crisis estética ecuatoriana.

Palabras clave

Paradigma estético, expresiones artísticas, filosofía andina.

252



Introduction

This article aims to contrast the aesthetic problem caused by the postmodernist trend and the possibility of having alternatives that allow another cognitive view in Ecuadorian art. For the analysis of this issue, two complementary sections have been structured. The first refers to aesthetic paradigms and derives in contemporary Ecuadorian art, which have reached predominance with the operability of postmodernist theoretical and ideological models adjusted to the requirements of the centers of global art. The second is about the axiom of postmodernist 'aesthetic samples' and the agency of artistic expressions, to get out of that paradigm and achieve the emergence of a current capable of facing the current crisis of aesthetic representation in Ecuador.

Because there are no specific references that allow the proposed theme to be located, the approach assumes a cognitive concert of information and reflection with empirical determination to shape the arguments that are carried out with criteria of logical-creative relativity, which finally aspires to reach an action of reasoned judgment. This way of dealing with the problem could be described as controversial, however, to assume the antagonistic threshold of the subject, it requires an investigative character freed of methodological purity that generally disturbs the knowledge process. Furthermore, it is about the aesthetic con-

dition. From the proposed perspective, the analytical statement requires an alternation to activate in a preliminary way this preliminary 'knowing' about the characteristics of the model implanted in Ecuadorian art and the circumstances in which the aesthetic modes that define the forms of expression currently operate. Obviously, this configuration declares its limitations; however, it values an interpretative context to appreciate different elements that seek a conclusive derivation.

Aesthetic paradigms and derives in contemporary Ecuadorian art

Thomas Kuhn, in *The structure of scientific revolutions*, describes the characteristics of paradigms and notes the changes they suffer as a result of scientific revolutions. From this theory, it follows that the paradigm has permanence when it operates within its laws and if others perturb them, it does not last. Likewise, Kuhn did not extend his ideas regarding paradigms to those which imposed on others of different conditions or that because of their qualities are not considered 'scientific' or do fit into the knowledge judgment.¹ This leads us to think that only qualified paradigms of scientists have influence and materialize, and that, according to their success or failure, they remain or are discarded. However, aesthetic paradigms that have theories, ideologies or manifestos that support them, as well as scientists, during their permanence and influence operate until their effects materialize in a variety of trends and expressions that are difficult to control. The latter is a contrast to the scientific paradigm since this can be interrupted *ipso facto*; on the other hand, the aesthetic paradigm, even invaded by another of equal or dissimilar magnitude, can remain in time or between times changing skin as many times as necessary *ad infinitum*.² The fact is that this paradigmatic archetype has the ability to induce the actor or spectator to make use of the jurisdictions of thought and introversion to define artistic dictations and ways of appreciating art, reproducing its sources and renewing its contents. In addition, when it operates it imposes judgments of taste in the same way that the unconscious defines ways of capturing reality; even, during the process of using compulsory induction instruments, it can also constrain modes of expression that are adverse to it; in the Ecuadorian case, those that come from popular art or from ancestral communities that base their artistic and aesthetic experience in Andean worldview.





As with the aesthetic impositions in the Colony and the beginning of the Republic until now, similar schemes have been imposed with three characteristics. 'Imposition', because external aesthetic models that define the production of artistic expressions are remorselessly transferred and are welcomed by local elites, assigning and demanding the transcription of their contents in accordance with that mandate; in some cases, the representations are facsimiles of that dictation, in others, some national tonality is added, but without disregarding the established precepts. 'Dominion', because this multifunctional influence is considered preferential in the social, cultural, artistic and academic spaces. Neglect has predominated in the development of aesthetic forms in the region, which is a sign of the inefficiency of the elites, of the cultural institution and the academy to produce alternatives that can confront the aesthetic models coming from the centers of global art. 'Exclusion', because the imposition of aesthetic forms of colonial evocation persists that adds the internal self-colony exercised by national elites, the cultural institution, and the academy, which, directly or indirectly, exclude or outlaw expressions that are considered inoperative in the dominant aesthetic model.

This aesthetic wandering that has been recurring since the end of the 19th century, in an early era, imitates with creole nuance illustrations from powers that had implanted colonial systems in America, affirming themselves with customary images of fauna and flora that satisfy travelers, geography and botany students, and the, then, novel anthropology, which demanded 'exotic' expressions for their research and as personal property. At the same time, the local aristocracy homologizes that gesture and extends the requirement to the portrait, the landscape and a renewed taste for religious art. The 50s of the 20th century mark the second era of the introduction of aesthetic paradigms applied in Ecuador; behind are left those artistic pretensions mentioned above, to give way to the modernist essay that intermingles with the controversial social, political and economic situation. This late influence regarding Europe and North America brings with it three constraints; first, imported artistic styles and theories that are arranged at the convenience of the 'high culture';³ secondly, aesthetic-political doctrines and manifestos from Mexico, Cuba, Brazil, and the Soviet Union are adapted; thirdly, in sui generis relationship between the previous ones, forms of expression related to the 'historical Indian', the 'racial Indian' and the 'popular' are determined, intervening their environments with expressions of indigenism, social realism, ancestralism, magical realism, among others, adjusted to the aesthetic taste of power groups.⁴ This aesthetic progressivism, led by 'high culture' and instrumented by 'cult art',

cultural institutions and academia, by then, is declared as the prominent of 'national culture' through government officialism. This event accompanies the consolidation of the museum and the establishment of statutes on heritage works; centers and art galleries are promoted, halls and contests are sponsored, theaters are opened and experimental dance is promoted; and the regency of curators and critics that certify the prominent authors begins. This modernist proclamation in Ecuador has a syncretic connotation between tradition and revolution that, against its ideological inspirations, fails to overcome the impositions of the market and the historical incision produced by the well-known aesthetic paradigms;⁵ nevertheless, it extracts from these what is necessary to define 'national' artistic and cultural expressions that end up reaffirming the difference between 'high culture' and 'low culture', between what 'is art' and 'is not', generating a 'semaphore subject'⁶ that activates interests according to the circumstances and that will remain onwards.

From the 90s of the 20th century, with the equally late introduction of postmodernist and conceptualist theories and practices, adjusted to the neo-Marxist doctrine, coming from Europe and North America and some places in South America already occupied by these precepts, the national 'high culture' accustomed to the novelties of artworld (institutional art)⁷ of the global centers that dictate fashion art⁸, shelters this new episode without hesitation and glimpses it as an event destined for national art and culture. This appearance that has already taken much of the artistic and cultural spaces increasingly promotes new derivations that have a marked influence on contemporary Ecuadorian art. In the beginning, this suggestive and insurgent aesthetic paradigm brought with it the 'liberation' of the modernist paradigm that had reached a state of exhaustion, however, it is not enough to foresee that the application of this new spectrum becomes increasingly imposing and dogmatic, gradually taking the institutions of government, cultural and academia. Unlike the practices of modernism that maintain a rigor in the work of artistic expressions and with regard to exhibition and market spaces, the manifestations of this new trend have no specific place, since the practices become disorderly and inconsistent and prevail the performance of nonsense, appropriation and facsimile, the profitability of the show and political and ideological affinity. However, the exercise of this aesthetic gibberish is managed under expert parameters through strict compliance with contractual terms for access to official funds, internships, and residences. Since then, this hegemony continues to reproduce this dogma with novel elaborations provided by the so-called 'aesthetic samples'⁹, which



in the Ecuadorian case are expressed through representations that have preference for inputs obtained from individual and collective intimacy or indiscretion, marauding in the marginality and social psychopathies that are reduced to discursive that pretend to overcome the materiality of the object; and the more advanced, with material investments that translate into facilities and objects that recreate panegyric and disgraceful statements that arrive at simulations in relation to those exposed in the centers of global art.

In the last decade, this national aesthetic necromancy has revealed extraordinary entelechies that vaporize any motivation or resistance to possible options; similarly, 'social images' have been taken by manipulating them to reduce them to diffuse utopias. In sum, the neo-Marxist postmodernist paradigm in art has contributed more conflict than the modernist paradigm, increasing uncertainty and confusion over the way they operate. This appearance, which generally assumes a relationship with vulnerable and emerging sectors in situations of risk or defection, is also assigned mastery in matters of art, aesthetics, and culture in spaces of educational instruction; nevertheless, this exercise between social vindication, aesthetic supremacy, and pedagogy, is nothing more than an inferred strategy to create the new myths for 'works' with aesthetic exercises that ensure the establishment of objects with shining fictions and that speculate in the market.

Given the scope of the issue, it is interesting to locate the scenario of the 'postmodernist 'aesthetic samples' paradigm with some depth, possibly describing the most critical stage of Ecuadorian art from the mid-XX to the beginning of the XXI. This discursive system that emanates from different theoretical starts, but of similar ideology, is heterogeneous in form, but synonymous in the background and is welcomed by national contemporary art. Disseminated this model in the possible spaces in the last decade of the XX century, the 'adaptation' of the model is carried out through intensive courses with agents and promoters of art, who demand a change from the previous paradigm since the artistic concerns are bog down and an activation is necessary that allows them in accordance with the demands of international contemporary art.¹⁰ The adherents to this paradigm undertake work in their workshops, at the beginning stumbling before the difficulty of resembling the lofty cosmopolitan fashion art; however, soon there is a way to adapt to the new requirements; in some cases, resorting to appropriation and banality; in others, incorporating aspects of popular culture, antagonistic visual amusements, and representations of personalities and events of national and internatio-



nal resonance. At the end of the 20th century, the legitimization of the expressions of the postmodern and conceptualist 'aesthetic samples' is promoted, which already have their own circulation and consumption circuit. Likewise, an assortment of rhetorics declared 'deterritorialized', 'radical' and 'contestants' with grand demonstrations following the dictates of the global street lamps of contemporary art is officially installed.¹¹ At the same time, an eloquence is established that implants a communicational mode with a way of thinking, writing and dialogue through the cultural institution, academy and epistemic systematics.¹²

To deepen the theme of the current model of art and its various allocations, it is necessary to review some of its sources, to understand the facts mentioned above. It can be seen that at present the term 'contemporary' has become controversial; in the case of art, the new model does not wish to be assigned the specific concept of 'contemporary' nor of 'aesthetic paradigm'; it prefers to be called 'expression of the new aesthetics of contemporary art' or simply 'aesthetic samples' because it has adopted as conceptualization high degrees of indeterminacy and expressive variability. Even this form of diffuse rhizome not only declares different contents, but it also assigns indefinite apprehensions and operability to open fields of experimentation regardless of nature, since it does not expect to create concrete situations as in modernism. Such is the openness, that it admits that its sector can be blurred in others and vice versa, since its discursive instance requires open and 'disinterested'¹³ persuasion as an *ultra plus* of its actions. This new paradigmatic example is so versatile that it can be mimicked in any place and circumstance with the purpose of spreading and achieving hegemony. For this reason, it is not surprising that among its strategies it is 'deterritorialize' everything in its path and declare itself 'insurgent' as a maneuver for the exercise of 'deconstruction'.¹⁴ In this way, the way of thinking about the contemporary 'work of art' is declared complex and metamorphic and tends to dissipate its spectrum of empire, using mirrors to hide the image. Ramos Collado (2006), curator and supporter of 'aesthetic samples', criticizes the concepts of 'art', 'artist' and 'aesthetic experience', stating that art must contain the premises of disobedient and radical; even, instead of 'contemporary art' he prefers to call it "contemporary art with relevance to novelty". However, the terms of insubordination or radicality as coetaneity and novelty that it sustains with respect to those it criticizes, contaminate each other because the products that are promoted end up being designated 'work of art', subordinated to its circuit that, like the 'established' one, depends on the market.





For his part, N. Richard proposes to shorten the distance between art and life by deconstructing the idea of the ‘frame-format’ to move to ‘landscape-support’ using the living materiality of the body as a support for ‘sacrificially ritualizing it’; all this aesthetic scaffolding, he says, “to avoid authoritarianism of power over the subject and its deformations, docility on the part of the art institution and resignation in front of museums, galleries and criticism of traditional art” (2007, pp. 16-24). Neither more nor less than a failed insurrection, because Richard proposes to change the formats and supports for the expression of art as ‘insurrection’, however, this is not new, it has been a norm used by modernism and centuries ago native communities. innate use of the body as a utility to speculate on the artistic, it asserts the use of all means in order to erect ‘works of art’ judging that this act of ‘ritualized sacrifice’ contributes to ending power, institution, and tradition. However, Richard, to deploy this ‘aesthetic idea’, prefers to hide the need to deploy it in the spaces that it attacks.

A compromise case is the statement of J. L. Brea (2016) who criticizes the current language of contemporary art without assuming partisan responsibility in it. He is right when he considers that the current works are indecipherable and difficult to explain, also that they do not really contribute to the criticism of the institutionality of art since it is necessary to combat artistic languages because they appear suspect and belittle communicability. In addition, he considers that “the paradigmatic figure of contemporary artistic discourse is allegorical” (Brea, 2016, pp. 31-59) calling it false and hermetic; Undoubtedly, Brea questions his own aesthetic territory, but cannot stop belonging to a model with these characteristics.

Without departing substantially from those mentioned above, N. Bourriaud (2006), who is the author of *Relational and Radical Aesthetics*, expresses that diversification is one of the features of contemporary art nonetheless this variation has been characteristic of all ages. Also, mimesis is in crisis, as well as any documentary gesture in its literalness. Of course, in the matter of art, the imitation of reality or nature is a fact since the late 19th and early 20th centuries with representations of expressionism, cubism, abstractionism, etc. Possibly, his question about “How can the representation of the world still constitute a bet for today’s art?” (Bourriaud, 2006, p. 24), could disturb him; however, the answer is obvious, what else art can deal with that is not representations of the world and life. Several thinkers, from ancient Greece, some modernists, and some radical postmodernists, have shown too much efforts so that the interpretative achievement is not a simple reproduction, even those expressions that are linked to the political and social commitment of

art. Bourriaud (2006) does well to maintain that one of the needs in art is participatory collectivism as an attenuator against the extreme uncertainty of the present. On the other hand, in the scenario in which the postmodernist 'aesthetic samples' of neo-Marxist flavor unfold, the sincerity of J. Stallabrass is exceptional. Author of *Art Incorporated* where he examines 'the rules of art today' following the proposition of the playing field of P. Bourdieu, as well as W. Benjamin in *The author as producer*, Stallabrass identifies contemporary art as "a machine to produce a marketable meaning" (2004, pp. 100-174). This has happened since the Renaissance and in later times; It also happened in the second decade of the 20th century with the privileges achieved by the *ready-made* (Duchamp) and continues to happen with the postmodernists 'aesthetic samples' and their versatile configurations. Which, very time, and despite saying they present resistance to power and institutionality, adapt to the privileges governed by the global system of art and the neoliberal version of the economy. T. Smith is more idealistic in *What is Contemporary Art*, when he faces the dilemma of defining the 'contemporary' since his discussion, not only covers spaces of art, but also the ontological character of the present and asks "What does it mean to exist in contemporary conditions?" (2012, p. 48). In this regard and referring to art from his theoretical vision, he states that the idea of 'being together' becomes an opportunity to appreciate the general and universally participatory, by virtue of which it is urgent to abandon instances of isolation, personal particularity and alienation under the terms of modernity. Smith seems not to notice that modernity and postmodernity not only share almost similar terms, but they are also mediated by increasingly blurred boundaries. Basically, they cannot detach from each other because they are dependent referents and, because of the results, share consequences; the difference is that the first represents the broken promises, the second the fictitious overcoming. Although Smith does not admit it, the proposal of 'being together' applies to this last reflection and answers his question.



The axiom of 'aesthetic samples' and the agency in artistic expressions

It would be necessary to specify from now on that the postmodernist 'aesthetic samples', in the terms stated above, are really an axiom that in Ecuador has had unexpected and counterproductive effects. The causes derive in appropriation and recycling of images, treatments involved in



existing and imaginary objects, artificial interventions in the body, animals, nature and the environment; supposedly to exceed the limits of everyday life and the trances imposed by power.¹⁵ This fateful 'aesthetic' befalling, which has the principle of 'everything goes', is so diffuse and diluted so quickly that its ephemeral condition presents difficulties in naming specific cases that define 'works' with stable conditions for analysis. In this sense, anything can become art, it is enough to add grandiloquent and simulated rhetoric in the familiar terms, to be indicated as 'unfathomable works of art'. The unusual thing is that the miscellaneous and uncertain objects produced by this apothegm occupy the exhibition spaces available for artistic expressions; at the same time, the reproduction of the theoretical and ideological livelihoods that have covered a large part of the estates dedicated to cognitive work and teaching is quite vigorous. Such is the prodigy of this concert of topical assets with their unstable collection, that they are called 'objects of reflection'. It is not that this portent is questionable in reflective matters, it is understood that conceptual, theoretical and ideological diversity is lawful at any time and place. The problem is that it has become demanded and protected by a regime that demands a unidirectional and unequivocal treatment; something as absurd as that it turned out that this way of operating has become hegemonic and accepted without qualms in the institutions and the academy.

Unlike the lack of definition of the 'works' of the paradigm in question where its specificity and inventory are hindered, with the arguments noted above, it is possible to distinguish with some clarity the forms of administration and how it operates in the possible levels. Even more doable is to identify the subjugated by this model, the postmodernist-conceptualist Creoles, who naively assume that Marxism in orthodox terms is still an option. They generally declare themselves 'informed' and defined as mature, favored and evolved. And, on the contrary, those who are not instructed in the regent theories and ideology that and do not handle the guidelines of fashion art, are called 'uninformed', that is, immature, limited, retrograde... and are excluded because is considered that they remain in the past, an 'anomaly' that has as its purpose the denial of spaces of expression, the favor of the curator, and the access to places of exhibition. This appearance of merit and demerit is the one mentioned by E. Ímaz (1985) when referring to I. Kant about the 1784 text *What is the Enlightenment?* (*Was ist Aufklärung?*).¹⁶ For his part, M. Foucault, in his 1975 conference, calls into question the *Aufklärung* that makes a distinction between those who are 'of age' and those who are 'minors', which takes sides in the dictates of the developments of the Enlighten-

ment, which is nothing other than the submission to modern rationality to reach the necessary maturity.¹⁷ Dussel, also citing Kant in his 1992 Frankfurt conference, points out that the Kantian idea poses this form of emancipation as a way out of immaturity, carried out by the effort of reason as a critical process that opens humanity to a new historical development of the human being, and criticizes this position in view of the fact that it is a directed strategy for the exclusion of other epistemological ways of conceiving the reality of the world. Apparently, the accidents of modern rationalism are in sight and begin to be analogous to the results of postmodernism; perhaps the divergence lies in the fact that the first case pays for the myth of rational emancipation, while the second unfolds through the myth of irrational agency in overcoming the former. At the present, with similar consequences.

This conflict is undermining possible alternatives to overcome the crisis in the arts; above all, because the theoretical, ideological and expressive question of the 'aesthetic samples' that represented in principle the liberation of an oppressive system, is reaching a state of saturation that prevents the visibility of options. This exhaustion is perceived in Ecuadorian contemporary art, whose 'works' and 'objects of reflection' have become official and part of the aesthetic tradition in the first two decades of the 21st century. However, we continue importing arguments to nourish the aging 'aesthetic samples', activating the dependence and semapherization¹⁸ of the agents and institutions where this subordination governs. This approach prevents, in a certain way, visualizing a 'dissonance'¹⁹ that causes a medium-term exit from this dire preeminence. The brief introduction that emphasizes A. Lesper about this situation, by identifying this imposition and dominance as the "fraud of contemporary art" (Lesper, 2017)²⁰, is enough to warn what is happening with Ecuadorian art.

Some features about the current axiom have already been mentioned, however, it is necessary to deepen the way in which the 'object of reflection' operates from the commented new 'aesthetic samples' when they involve the notion of reality.²¹ We know that every expression contemplates it and is interpreted through abstraction, whatever it may be and at any time; therefore, the object of reflection referred to art is not a patrimony of modernism, postmodernism or the neo-Marxist ideology. It is a thinking substance that has been present in cultures and civilizations during all ages, the different is the way to understand and experience it. However, the reflexive conversion made by postmodernism in art, based on its theories and ideology and the commendable effort to appear 'revolted' against modernism or anything that contradicts its desires, pla-



ces it in diffuse strata that accommodate exedently stubborn expressions. Like modernist practices, contrary to postmodern theories and Marxism, that stubbornness is based on the stray tastes of the capitalist system.²²

When inquiring about the way of conceiving the postmodernist ‘object of reflection’, which attempts to divest itself of precedents, seems to ignore that the capacity for abstraction is based on the founding myth of Western philosophy, whose origin lies in medieval nominalism²³ and modern rationalism, that have gravitated in the discourse modes of contemporary instrumental rationality. The art in the application of the “aesthetic samples” postmodernists is no stranger to that influence. Whatever mode of reflection is presented, it is an inferred conceptual strategy and a maneuver of reason to scrutinize the sensitivity of man and the relationship with nature and objects. The divergence lies in that the reflection of modernist aesthetics impels with strict aspirations, while postmodernists are reactive without desires and move away from the body and objects to transversalities of irrestrictive efforts. It is the case, that the way of conceiving art throughout history settles around pendular events that elaborate increasingly complex rhetoric, it is the case of what happened between the 20th and 21st centuries. The lack of novelty of postmodernist art and aesthetics since the mid-20th century, maybe that they articulate ostensibly to the mythical Marxism, which at the beginning of the 21st century, “are defined based on broader factors such as their circulation and legitimation modes; in other words and if one speaks from a Marxist point of view, it is the modes of production that finally define contemporary art.”²⁴ The anonymous author of this phrase (cf. note 24) perceives that unlike the art of the previous period, the current one is not restrictive and has means of authentication supposedly removed from the capitalist system. Already explained about the latter, it should be added that the postmodernist ‘artistic work’ with a Marxist tendency are now adjusted to the neoliberal model of the economy. This confirms that the ‘deconstructive’²⁵ operation of the ‘aesthetic samples’ that underpin contemporary art, at least in the Ecuadorian case, lends itself to manipulation as many times as necessary. As Regnasco (2004) explains when referring that this form of maneuver reveals “the unfolding of man, the essence man of projected and subjective” (p. 49). The postmodernist version of contemporary art has become official, elementary and hallucinated. It is not utopia and insurrection; it is one of the most confusing aesthetic versions of recent history.

Postmodern play in art is so common today, as obvious are the reasons that induced Ecuadorian ‘cult art’ of the 20th century to adapt



to the isms imported by the national elite. It is inextricable for contemporary art at the beginning of the 21st century to feign novelty with the aphorism: 'the object does not matter, but the discourse that sustains it' ("what remains is the idea, not the object", cf. note 30). Today it is a useless appearance: in the circuit where it is produced and legitimized, physical work is as necessary as evidence and merchandise, that the required presence displaces the rhetoric or the certificate that proves the false absence.

The sublimated situation of the postmodern reflexive object has entered into crisis due to its own concussion. This convulsion is due to the pruritus of separating from Modernity without accepting that the relationship is as close as the correspondence between the Middle Ages and Modernity. More conflictive is when it uses with zeal the rationalist functionality of modern epistemology as a tool to reason its allocations. This is the case of the 'object of reflection' of contemporary art. Assuming the terms of K. Wilber (s/f) in *The Three Eyes of Knowledge*²⁶, it can be noted that this thinking in art resonates with what happened in medieval times when the 'eye of the flesh' was submitted to the eye of the mind 'which resembles the religious reason of the Inquisition that had as its goal the requisition of the body to save the soul as truth in the face of any other human belief. In the case of postmodern aesthetics, the unfolding of rhetoric is the artistic work that refers to the 'eye of the flesh' as a means to safeguard the irrefutable 'eye of the mind'. As noted, this arcane motion of abstraction parodies in the vaporous logic of the neo-Marxist postmodernist aesthetic simulacra. Cheroni (2010) mentions that postmodernists, having not found firm support, accept that modern philosophy is the only one to be taken into account (pp. 84-86).

Obviously, it is largely due to M. Duchamp (1887-1968), one of the precursors of the paradigm of the 'new postmodern and conceptualist aesthetics', the situation of contemporary art insofar as discursive seeks the apparent dissolution of the material object for hierarchize the object of reflection. It is not that Duchamp defined the current course, in his time he proceeded impulsively and deciphered a conceptual enigma; it was the later conjectures that built the 'Duchamp effect' and disseminated it in a multitude of obsessions. His 'artistic gesture' of 1917, as described below, is a product of the exhaustion of the artistic period and dissatisfaction with the established aesthetic system. In the 70s of the 'Duchamp effect' is affirmed in the centers of global art; two decades later, it is assumed by the Ecuadorian subsidiary²⁷, which takes in its own way the emanations of the 'aesthetic samples' reproducing the installation of objects, technological directions and performance actions²⁸; Likewise,



its production and consumption circuit sponsored by the government sector, the “high culture” and the “curatorship” with skilled transactions in the art market are legitimized.²⁹ In the first decade of the 21st century, this discursive model is imposed, which gravitates substantially in the surrounding reality. Highlighting the case of Duchamp is enough to understand what happened since the second half of the 20th century and the beginning of the 21st. Duchamp, using the appellative of R. Mutt signed on a toilet and being a judge and part of the Hall of Independent Artists (NY, 1917), presents this piece of porcelain made in series as a mockery of what he considered the usefulness of art, generating a way of thinking and criticism in symbolic production.³⁰ Since then, a way of legitimizing conceptual objects and metaphorical elaborations that decontextualize reality by means of the hypnotic postmodern deconstructive way that influences artists, curators, and academia has been professed. Medina (in Ávila and Palomera, 2017) in this regard points out:

That contemporary art has the constant need to refer back to Marcel Duchamp is due to the fact that the name of ready-made has become the universal validation resource of the contemporary [...]. In the manner of any myth of origin, ready-made appears at the same time as an argument to justify the daily practice of present art, as an object of an unattainable desire and as an oppressive model and without the possibility of revocation (pp. 4-17).³¹

In this maneuver, Duchamp undoubtedly does not dispense with the author's hand and the presence of the object without which the idealized operation that gives way to ready-made would not have been possible.³² Duchamp knew well, at the beginning of the 20th century, as well as the generators of the ‘aesthetic samples’ of the mid-20th and early 21st centuries, that this ploy favors the transition from material appearance to conceptual³³ and ideological significance. However, in recent years, this logic of floating avalanches has begun to emerge, established as dominant in contemporary art and that does not admit criticism or discussion. However, in recent years, this logic of floating avalanches has begun to emerge, established as dominant in contemporary art and that does not admit criticism or discussion. From spaces of resilience, the system imposed by Ecuadorian fashion art begins to be revealed, which, persisting in self-colonization through postmodernist-Marxist objection in art, has no choice but to remain faithful to the *artworld*, using the academy and the cultural institution.

Another background on the postmodernist aesthetic model is perceived in the enlightened modernist W.F. Hegel, who in the eighteenth



century brings forth the 'idea' of the absolute spirit and what concerns history in *Aesthetic lectures: the objective conception of art*, in this case, applied to the aesthetic and arranging it in a unidirectional regime and instrumented by reason. Something similar would be done by I. Kant in his celebrated *Critique of Judgment* when proposing a judgment of aesthetic taste that is not a judgment of knowledge and manipulated by reason. Both Hegel and Kant would have to transfigure the Platonic triangle and the Cartesian cogito to give operability to their philosophical proposals. This maneuver would be emulated by the postmodernists of the 20th century, transmuting the idea of place, body, and everything possible, providing the aesthetic of deterritorialized systems and deconstructive concepts to obtain objects of reflection unlike those provided by modernist reason.³⁴ In this transit, after the disappointment of the Russian revolution that destabilized European and Latin American followers, and disturbed the mixture between modernist art and Marxism, Marcuse appears in *The One-Dimensional Man* (pp. 10-17-28) to formulate a theory of individual and social liberation in rupture with the dominant model. Since the mid-20th century, between disenchantment and desire for emancipation, postmodernist aesthetics hastened a change of route that mixes events of counterpower in art, philosophy and the social, proclaiming the assertion of individual rights and participating in social and gender emergences. As would be expected, Duchamp's gesture is reprinted and the terms of Lyotard, Marcuse and Marx; Undoubtedly, this appearance is conducive to the settlement of post-modernist and conceptual 'aesthetic samples' in contemporary art that Brea, Bourriaud, Stallabrass, Smith, Richard, Ramos, among others, would later fertilize. Henceforth, this aesthetic modeling will govern as a method to operate the work of art.³⁵ In the Ecuadorian case, this doctrinal alignment reaches a sui generis realization activating art forms through cunning, fiction and metaphor against the status quo; also, to overcome the burden on the commodification of these products in the legitimation circuits, a pontific insurrection is assumed that fails to cover what J.L Venegas (2005) calls the 'double conscience' that accommodates itself to hide the submission to what is questioned. Generally, the postmodernist 'artists' and Creole conceptualists who emulate the cosmopolitans evade the public, philosophical and academic confrontation, attending exclusively to expose their "works" and "ideas" in spaces that reproduce their own ideologies.³⁶ It is known in advance that the public act is risky, for this reason the force of its condition is invoked that it does not admit interpellation in the field that dominates.



At present, the porphyry of contemporary Ecuadorian art contributes to understanding the moment that the work of art experiences at a global and local level. However, assignees of this axiomatic 'aesthetic order' prefer not to foresee the eminent tear of this diffuse supremacy that already fully shows their *ad vaculum* fallacy. Even the haste of this practice, which is sometimes dominant and sometimes tame, reissues self-colonization features by serving and reproducing theories and ideology without restrictions, without making any effort for contributions that accredit any alternative; what is worse, in this imitation it is excluding and eliminating artistic forms of expression and aesthetic sensibilities that escape its influence or dominion. Through time it can be seen that in this region of South America there has been a constant aesthetic gloom, in colonialism, modernism and now with postmodernist influence. As M. L. Pratt (1996) rightly points out, in the Andes "contact areas often have their origin in invasion and violence and translate into social forms that are based on drastic inequalities" (p. 3). With the supremacy of that model, it is evident that the dismissal of popular artistic expressions, indigenous art and a large part of expressions with an artistic trade is reissued, because they are not operable in the official enclosures of institutional art, which by Long centuries have had to endure "a long struggle for interpretive power" (Pratt, 1996, p. 3).

It has been characteristic of globalization to build global systems of domination and 'aesthetic samples' are part of that geopolitical strategy. In Ecuador, this maneuver of immeasurable proportions is post-colonial in nature, neutralizes the independence of artistic and cultural expressions, expels the Andean and popular imaginary from the field of art, and breaks down any potential dissent. In this context, for two decades the postmodern Creoles, members of the 'high culture' that are part of the cultural institutions, government and academia, as well as the followers of the dictates of the centers of global art run by the Local and world economy systems have constituted a sort of national committee to reproduce the practices of the new transnational aesthetic order and its financial constituents.³⁷

Contemporary art has failed in the attempt to oppose the mythical modernist aura and its picture of traditions, as well as the capitalist financial system that it supposedly refuses. Now we can observe the results of the paradox of the 'postmodernist and conceptualist 'aesthetic samples'; perhaps to the disgust of Duchamp and other proponents of this aesthetic simulation, the direction that contemporary art has taken with altered versions of the artistic and aesthetic experience is no longer the



same as originally presented by the reflection on the toilet of R. Mutt and the wayward postmodern theory event. Undoubtedly, it is the reissue of the grief that made the freudomarxist J. F. Lyotard (1924-1998)³⁸ visible, when at the end of his life he experienced that his followers had falsified the contents of his celebrated text *The Postmodern Condition* (1979). With the historical and off-key theoretical, philosophical and epistemic dependence that has taken shape in Ecuadorian contemporary art, it is time to assert the principle of contradiction with the break with respect to the 'aesthetic samples' that have stifled the field of art, becoming a barrier to the epistemological advance of art and aesthetics in Ecuador.

Conclusion

A reference has been sought regarding the crisis of Ecuadorian aesthetic representation in the indicated period, without achieving it. It was necessary to begin this inquiry based on the experiences that the author has had in the last three decades, while confronting them with various sources and authors who have expressed opinions on international and national contemporary art. With the limitations of the case, unveiling what happened with the carried-out records allows us to know, in a preliminary manner, how the theories and ideology that support postmodernism and conceptualism in the arts have operated. This shows that the topic is relevant, but it does not suit the interests of the hegemony that transits through government halls, cultural institutions and academia; especially to those who hold the simulation of the paradigms 'aesthetic samples'. Surely for the followers of this paradigm, it will be difficult to get rid of this influence, since they would enter into a state of helplessness as well as the resulting 'works', however, it must be understood that the mode of idealizing them is exhausted, as well as the model of reflection that sustains them. The numbness aggravated by this paradigm since the mid-20th and early 21st centuries has accumulated too much uncertainty in symbolic and cultural achievements; consequently, this situation is signaling the collapse of art and the cognitive treatment of aesthetics in the last century in the Andes region. There are so many questions in this regard that the answers are ongoing and much remains to be elucidated and debated in the context of the productive and educational significance of art, and in the change of course on the knowledge of aesthetics in Ecuador.

In the beginning, defining and developing the theme seemed like heresy, facing it has constituted a risk for future extensions, but putting



the current paradigm on trial is a necessary task that cannot be postponed. This is due to the fact that it is not possible for art to continue deriving proceedings that are fixed in aesthetic prostheses, either by assigning veiled worlds and floating signifiers or also domains with allegorical expressions destined to the ephemeral spectacle and ideological profitability. With greater reason, when the region of the Andes has sufficient philosophical-aesthetic foundations that can contribute to an “other world” for Ecuadorian art.³⁹

The problem is not that the paradigm out of the ‘aesthetic samples’ exists like any other that has produced Western modernity and the capitalist system, the urgent thing is to detach ourselves from this soporific model that is sustained in the immemorial postmodernist, conceptualist, and Marxist theories. First, by providing an opportunity for expressive manifestations that have been buried by this dominance in recent decades; secondly, by opening sources of research and alternative aesthetic expressions; primarily, looking back at the Andean culture and philosophy to propose opportunities for Ecuadorian art.⁴⁰ It is time that the academy, the last stronghold with alternative reflective possibilities, becomes aware of the fraud and what has been positioned in disciplines, subjects and curricular programs regarding the theorization and practices of art, aesthetic philosophy, artistic pedagogy and epistemology of art. The contribution to overcome the crisis caused by postmodernist aesthetics can initiate activation with what is related to the Andes region, the Andean worldview that provides opportunities to overcome the contradictions of contemporary art. This intercultural proposal by J. Estermann (1998/2006) mentioned in *Andean Philosophy*, as well as issues of Ecuadorian art and opportunities presented by Andean aesthetics, mentioned in the publication of the author of this article, *Approach to the Andean indigenous aesthetic*, TSM-SM (2018).⁴¹ These contributions can cement an epistemological flow for alternative aesthetic, artistic and cultural projects in Ecuador and, of course, contribute to these purposes to enrich the universal vision of aesthetics.

Notes

- 1 According to I. Kant, the judgment of taste is not the judgment of knowledge. This thinker considers that feeling is an anomalous entity with respect to reason, therefore, the latter must prevail over the former. Kant was among the first with Hegel, Baumgarten and Addison who in modernity have aesthetics as a science but far away from the scientific condition.



- 2 For this reason, even during era changes artistic styles and trends can remain.
- 3 Willing to serve the elites that run the economy and politics. Its beginning is insinuated in the first Government of Ecuador with Juan José Flores, in whose presidency the School of Arts and Crafts Miguel de Santiago is created; thereafter, 'high culture' is made up of the elites who run the government and cultural institutions in relation to political and economic powers. Modernity in pictorial art brings classicism and renewed landscaping, impressionism and expressionism, cubism and abstractionism, surrealism and magical realism, etc.; these currents are also projected in literature, theater, dance, etc.
- 4 The first is exalted and accepted by the power groups; They even claim membership. The seconds are used according to the occasion.
- 5 This trend extends in literature, sculpture, theater and dance.
- 6 Depending on the governmental, cultural and academic institutions, in order to preserve their status, they sometimes glimpse a tendency of the left, sometimes of the right and that of prevention.
- 7 Term used by K. Mandoky in *Everyday aesthetics and cultural games* (2006, p. 28).
- 8 This term is proposed by the author of this article to define the 'fashion art' associated with the postmodernist, conceptualist version associated with the mythical and stubborn Marxism. This expression is enunciated in several sections of the author's publication in Introduction to Andean indigenous aesthetics, TSM-SM (2018). On this occasion, fashion art refers to expressions that fit the paradigm of aesthetic samples'; that every time, they denote signs of decay due to the uncertainty of the 'works' proposed and the decline in aesthetic-ideological indoctrination (postmodernism-Marxism) that leads to the profitability of the collective spectacle and individual egocentrism.
- 9 Among the first Duchamp, later with Brea, Bourriaud, Stallabrass, Smith, Richard, Ramos Collado, among others. This article briefly indicates the characteristics of these authors' thinking but with greater scope the effects that are enunciated in the course of the argument.
- 10 The courses are taught mainly in Guayaquil, Quito, and Cuenca by scholars of this current, among them, Rige (English), Bellido, Mellado (Chileans), Álvarez (Cuban). The author of this article witnessed the introduction of this paradigm and experienced this 'learning' in 1992.
- 11 Since the end of the XX century and the beginning of the XXI, 'deterritorialized' and 'radical' dictations have been imposed which, then, are transmuted into imitations that define Ecuadorian contemporary art. This form of postmodernist interference that brings with it aesthetic attitudes, sometimes barbaric, does not differ much from what has been going on for more than two centuries with respect to popular and ancestral aesthetic manifestations.
- 12 A good number of institutions are already under this aesthetic-ideological regime. Similarly, a jargon is established with postmodernist and conceptualist terminologies typical of the paradigm of new aesthetics or 'aesthetic samples'.
- 13 In the 18th century, Kant enunciates the "disinterest" applied to the judgment of taste as an indispensable requirement to observe the aesthetic feeling. The position in reference does not differ in anything from that proposed by Kant, they pursue the same objective; even, the proposal of the postmodernist aesthetic paradigm (the 'aesthetic samples'), reaffirms the aesthetic as a matter adrift without any opportunity, as Kant prevents, of being thought of as a judgment of knowledge.





- 14 For Foucault, Derrida, among other postmodern structuralists, in the deconstruction of reality subjects and objects are invented through language, turning them into anything. This is also not original of postmodernism, it has been going on for more than ten centuries in literature, poetry, theater, etc.
- 15 In the postmodernists 'aesthetic samples' the 'extraordinary' is imposed, pre-eminent idea that has lost the discernment of reality, including the perceptual imaginary, with hallucinations that are falsely arranged, on the contrary, to dispel the worldliness of the powers of turn.
- 16 E. Ímaz in the Kantian writings makes a broad explanation about the text of Kant *Was ist Aufklärung?* In this article, it is sufficient to understand the denominations of 'majority and minority' regarding the practices, exclusions, and uncertainties caused by the operability of the postmodernist paradigm applied in the arts.
- 17 Foucault in his work on the Enlightenment, analyzes this text by Kant interpreting these verdicts that define the before (immaturity/minority of age) of the arrival of the Enlightenment where the arrival at maturity or 'coming of age' is contemplated. Foucault quotes the Kantian premise: "To characterize the minor status 'obey, do not reason' [...] humanity will grow older when you no longer have to obey, but when it is told to 'obey and you can reason how much you want'" (in Hernández Rodríguez, 2017, p. 154). This classification of the states of being, between those who have maturity and those that do not, has been frequent since the Colony and in what is now Latin America during the twentieth century, with the introduction of modernism and Marxism. Since the mid-twentieth century and early twenty-first, with the postmodernism and neo-Marxism something similar occurs. This way of maneuvering the subject has been favorable in colonial, dictatorial regimes and in the 'revolutionaries' with a democratic appearance.
- 18 A kind of "double conscience" in the terms that J. L. Venegas (2005) points out.
- 19 This term is presented as an outlet to the current state of contemporary art. 'Dissonance', in this case, is synonymous with 'dissent' to think freely and comes close to the Greek term *hairetikós* (heretic) which means 'he who is free to choose' or 'free-thinking person'. Since the Middle Ages the dogmas of each temporality, including colonialism, have transformed the term 'heretic' into derogatory. Each era makes a reference to the term: in the Middle Ages, 'heretic'; in modernism, 'primitive', 'barbaric', 'immature'; in the postmodernist extension, 'uninformed', 'limited', etc.
- 20 Most of the 'objects' of this circuit are what Avelina Lesper calls VIP versions (video, installation, performance), which are presented as dogmas that do not allow doubt or debate. This form of artistic production also stimulates the interaction of the spectator and the work in the physical, sensory, visual-technological, biological necessity, etc.
- 21 The paradigm that represents this aesthetic axiom entails the notion of 'reality' when accounting for the subjects and objects with the treatment of a previous template that simulates and reconstructs them until they become a discursive phantom without certainty.
- 22 Inheritance of the capitalist Modernity that in the period of the postmodernist aesthetic axiom, in contrast, is removed to use the neoliberal version of the economy in terms of the relation of operations by beneficiaries, which is legitimized in the circuits that the 'high culture' handles, the 'cult art' and intervention of 'art curator'.
- 23 In the fourteenth century, with Ficino that raises certain bases of Western rationalism; later, with the pantheistic rationalism of Espinoza. In aesthetic matters it was widely considered the definition of science by Baumgarten in the 18th century, also passing to Kant, Hegel, Addison, Burke, among others; also, with modern thinkers

- between the nineteenth and twentieth centuries, until the postmodern of the twentieth century.
- 24 Textual words in the report of the evaluator accredited to the INDEX Contemporary Art journal (Faculty of Architecture, Design, and Arts, PUCE, June 2018). Commits the improvidence of issuing a value judgment on the position of the author who advocates an aesthetic opinion based on Andean cosmology and questions the supremacy achieved by postmodernist aesthetics. The double-blind hopes to impose their theoretical-ideological affection for the author to comply with, betraying adherence to the postmodernist-Marxist vision and hinting at the imprints of Brea, Bourriaud, Stallabrass, among others.
 - 25 Structuralists such as Foucault and Derrida propose the 'deconstruction' of reality. With this operation, there are no subjects and objects, because they can be created in language and it is the latter that creates reality. For example, by arranging flowers on a table, with deconstruction, they can become a river full of stones.
 - 26 Wilber, in *The Three Eyes of Knowledge*, performs a comparison between the Middle Ages and Modernity regarding the functionality of epistemology as a tool of reason.
 - 27 During the 90s, a vast sector of 'high culture' and 'cult art' affiliated with neo-Marxist postmodernism. The local headquarters also operates through curators and critics linked to the cultural institution and the academy. Some artists are not aware of the contents of this aesthetic trend, they follow it because it is fashionable and allows them to access the circuit.
 - 28 Varied disposition of things and actions that are called 'art', the result of late inspirations about Duchamp's gesture that occurred a century ago and the eccentricities of Bouys and Mendieta; divertissements and dislocations that are related to appropriations, transfigured photographs, fabulous manufactures, multimedia linked to the video and the screen, implausible mutilations and bodily functions, workswith animals and vegetation, etc.
 - 29 The 'works' and 'objects of reflection' tend to be covered up in relation to the commercial price, however, they are justified as any other product on the market. In Quito, you can see in buildings of financial, business and transnational corporations, the location of these 'works' that repeat statements located in other latitudes and rooms of contemporary art abroad (MOMA, NY; Venice Biennale, Italy, etc.,) and with that origin they are exhibited in national halls (Contemporary Art Center, CAC; Metropolitan Cultural Center, CCM; Biennial of Cuenca, etc.). All of them with high financing that gives rise to the rhetoric of 'border territories', 'problematic limits', 'register gentrification processes', 'inhabit antagonistic worlds', 'empty pillar translations', etc.
 - 30 For M. Duchamp the problem is not the object, but the mental and critical structure that is applied in a certain field of art. Duchamp had abandoned painting in 1913 and was looking through the ready-made and with the work *La Fuente*, to dissuade that painting as an expression technique is finished; In this way, he wanted to demystify the work of art by giving it a new reality. After the exhibition of the Independent Artists of 1917, Duchamp would take the toilet to gallery 291, where, in a 'properly tuned' environment he is photographed by Alfred Stieglitz, who for his fame and vivacity, would give importance to the insurgency of the ready-made promoter. Duchamp, saying that he has "lost the original", makes four copies with different toilets, which are valued in large sums and are located: 1951 in New York, 1953 in Paris, 1963 in Stockholm and 1964 in Milan. It is clever 'to reproduce the work' in this way, taking the prefabricated one and signing it with the alias: R. Mutt.





- As Duchamp himself would say: “What remains is the idea, not the object”. However, there are copies with high market value. Unlike the description of W. Benjamin’s ‘aura’, the case of Duchamp is perhaps the only one in which four objects of the same - called the source - keep aura being original and reproductions at the same time. Moreover, made and elevated to the art category in different years and located in four different places.
- 31 Medina in *Apropos of the ready-made*: notes on a genealogy in dispute, performs an extensive analysis on this ‘work’.
 - 32 On the reflection of the work of art, that of Duchamp (1887-1968) has its characteristics, however, it is not distinguished much from that of D. Diderot (1713-1784) or the spirituality of the artistic conceptions of V. Kandisky (1866-1944). In form, they are different visions, in the background, they are abstractions with similar relatum.
 - 33 The conceptualist conception in art is not original of postmodernism, every era of art has had a conceptual basis. The postmodernist conceptual legislature that governs in ‘aesthetic samples’ is only possible to manipulate reality with respect to art and induce it to the simulation of uncertain and fictitious worlds that contradict foundations of universal aesthetic feeling.
 - 34 The postmodernist deconstructive concept attached to contemporary art, in the period under investigation, is not a separate entity from previous compendiums: without modernism, there would be no postmodernism. To consider them apart is a mental fiction of easy refutation. The two phases, although opposed, are favored as communicating vessels.
 - 35 At the time, the modernists attached to Marxism and in the present the local followers of neo-Marxist postmodernism from their ‘logic’ attack against the ‘empires’ and ‘metanarratives’. In certain circumstances, they feel flattered when they are beneficiaries of their resources in the deployment of ‘traffic light’ syndrome. In Ecuador, there are several examples, among many, such as the Non-decorative Art company ARTNO-DECO S.A. Information Brochure, 1999; One Day Domestic Rituals, 2000; Projects with Allocation of Competitive Funds, Ministry of Culture 2008-2017; Imaginaries in barbarism, 2009; Policies at the Edge, 2009; Funka Fest, 2019, etc. Currently, they adjust to funds from the neoliberal diction of the economy.
 - 36 In the Guggenheim NY exhibition, from January and May 2018, *Ramas* is exposed, which consists of a few tree branches arranged in a corner of the museum; The artist sells the ‘work’ through a certificate that is exchanged for several tens of thousands of dollars with the corresponding commission for the institution. Same is the case with *Doméstica*, an installation consisting of an old-fashioned washing machine, in the upper part there is a refrigerator of the same condition with a crucifix on the door and ends with a TV of equal era; the ‘work’, arranged as a totem, is one of the ‘objects of reflection’, as are others of the same concept and whose authors are kept in reserve until sale. This was witnessed by the author of this article.
 - 37 Primary financier of the ‘works’ that are available in the legitimization and consumption circuit of this ‘artistic’ manifestation.
 - 38 He states that “postmodernism is getting used to thinking without molds and criteria” (Iriart, 1985).
 - 39 The Andean philosophy inherent in Quichua culture, popular expressions, and ancestral communities maintains an epistemology to understand and carry out in the production of artistic and cultural goods, and the object of aesthetic reflection.
 - 40 The *artworld* associated with ‘high culture’ only consider copying and spreading the postmodernist paradigm of ‘aesthetic samples’ to configure ‘national art’. They

reject the Andean philosophy and its cognitive component because it does not suit their interests. On the one hand, it represents a radical change that they could not face; on the other, the canones and power achieved along with the financial allocations would fall apart.

- 41 The author (2018) carries out an initial opening on the contents of Andean aesthetics, which can support a possible aesthetic theory from Andean worldview in the present contemporary.

Bibliography

ÁVILA, Sonia & PALOMERA, Mario

- 2017 La fuente de Marcel Duchamp, historia de una burla. *Expresiones es Cultura*, 10 de abril de 2017. Recuperado de <https://bit.ly/37rxYVn/>

BREA, José Luis

- 2016 El arte en el contexto contemporáneo. *Lápiz, Revista Internacional del Arte*, 291-2913.
- 1999 *Noli me legere: el enfoque retórico y el primado de la alegoría en el arte contemporáneo*. Murcia: CENDEAC.

BOURRIAUD, Nicolás

- 2002 *Relational Aesthetics*. Dijon: Les Presses du réel.
- 2006 *Estética relacional*. Buenos Aires: Adriana Hidalgo Editora.
- 2008 *Topocrítica: el arte contemporáneo y la investigación geográfica*. Proyecto Arte Contemporáneo. Murcia: Heterocronías.
- s/f *Tiempo, arte y arqueología del presente*. Murcia: CENDEAC.

CABRERA, Pablo Eugenio

- 2018 *Acercamiento a la estética indígena andina, Una visión de la pintura de Tigua*, TSM-SM. Quito: Centro de Publicaciones PUCE.

DUSSEL, Enrique

- 1992 El encubrimiento del otro, hacia el origen del mito de la Modernidad. En *Dos paradigmas de la Modernidad, definiciones* (p. 175).

ESTERMANN, Josef

- 1998/2006 *Filosofía andina: sabiduría indígena para un mundo nuevo*. Quito: Abya-Yala.

HEGEL, Georg Wilhelm Friedrich

- 1977 *Lecciones de estética: la concepción objetiva del arte*. Buenos Aires: La Pléyade.

CHERONI, Ariadna & PORTILLO, José (eds.)

- 2010 *Reflexiones sobre el pensamiento italiano contemporáneo*. Montevideo: Trilce.

ÍMAZ, Eugenio

- 1985 *Was ist Aufklärung? Escritos kantianos sobre ¿Qué es la Ilustración?* México DF: FCE.

IRIART, Carlos

- 1985 Jean-François Lyotard: "El posmodernismo es acostumbrarse a pensar sin moldes ni criterios". *El País*. 23 de octubre. Madrid. Recuperado de <https://bit.ly/2Qb5v07/>

KANT, Immanuel

- 2001 *Crítica del juicio*. Madrid: Espasa-Calpe.

LESPER, Avelina

- 2017 *El espejo del arte* (Material para documental). Quito.



- LIOTARD, Jean-François
1998 *La condición posmoderna*. Madrid: Cátedra.
- MANDOKY, Katya
2006 *Estética cotidiana y juegos de la cultura: prosaica I*. México DF: Conaculta-Fonca.
- MARCUSE, Herbert
2017 *El hombre unidimensional*. Barcelona: Planeta.
- PRATT, Marie Louise
1996 *Apocalipsis en los Andes: zonas de contacto y lucha por el poder interpretativo*. Resumen de la conferencia en el Centro Cultural del BID, Washington.
- RAMOS, Liliana
2006 Los frutos de la pasión: François Pinault y su colección de arte contemporáneo invaden Venecia. *Art Premium*, (15), 50-60.
- REGNASCO, Maria
2004 *El poder de las ideas, el carácter subversivo de la pregunta filosófica*. Buenos Aires: Biblos.
- RICHARD, Nelly
2007 Márgenes e instituciones: la escena de avanzada. En *Fracturas de la memoria: arte y pensamiento crítico* (pp. 16-24). Buenos Aires: Siglo XXI.
- SMITH, Terry
2012 *What is Contemporary Art. Thinking Contemporary Curating*. NY: Independent Curators International (ICI).
- STALLABRASS, Julián
2004 *Art incorporated: historia del arte contemporáneo*. Oxford University Press.
- VENEGAS, José Luis
2005 *Aesthetic De-Coloniality and Crole Double Consciousness*. s/e.
- WILBER, Ken
s/f *Los tres ojos del conocimiento*. s/e.



Document receipt date: July 15, 2018
Document revision date: January 4, 2019
Document approval date: May 17, 2019
Document publication date: January 15, 2020

Publication guidelines in «Sophia»



ISSN: 1390-3861 / e-ISSN: 1390-8626

1. General Information

«Sophia» is a scientific publication of the *Salesian Polytechnic University of Ecuador*, published since January 2006 in an uninterrupted manner, with a fixed biannual periodicity, specialized in Philosophy of Education and its interdisciplinary lines such as Epistemology, Deontology, Aesthetics, Critical Studies, Hermeneutics, Axiology, Ontology, Philosophical Anthropology, Sociology, Philosophical Analytics, among others, all linked to the field of Education.

It is scientific journal, which uses the peer-review system, under double-blind review methodology, according to the publication standards of the American Psychological Association (APA). Compliance with this system allows authors to guarantee an objective, impartial and transparent review process, which facilitates the publication of their inclusion in reference databases, repositories and international indexing.

«Sophia» is indexed in the Emerging Sources Citation Index (ESCI) from Web of Science; in Scientific Electronic Library Online (SciELO); in the Scientific Information System (REDALYC); in the directory and selective catalog of the Regional Online Information System for Scientific Journals of Latin America, the Caribbean, Spain and Portugal (LATINDEX), in the Matrix of Information for the Analysis of Journals (MIAR), in Integrated Classification of Scientific Journals (C.I.R.C), in the Academic Resource Index (Research Bible), in the Ibero-American Network of Innovation and Scientific Knowledge (REDIB), in the Portal for the dissemination of scientific production (Dialnet); in Latin American Bibliography in Journals of Scientific and Social Research (BIBLAT); in the Directory of Open Access Journals DOAJ and in repositories, libraries and specialized catalogs of Latin America.

The journal is published in a double version: printed (ISSN: 1390-3861) and digital (e-ISSN: 1390-8626), Spanish and English, each work being identified with a DOI (Digital Object Identifier System).

277



2. *Scope and policy*

2.1. *Theme*

Original contributions in Philosophy of Education, as well as related areas: Epistemology, Deontology, Aesthetics, Critical Studies, Hermeneutics, Axiology, Ontology, Philosophical Anthropology, Sociology, Philosophical Analytics,... and all interdisciplinary related disciplines with a philosophical reflection on education

2.2. *Contributions*

«Sophia» publishes critical studies, reports and proposals, as well as selected state-of-the-art literature reviews related to Philosophy of education. Accepting also results of empirical research on Education, written in Spanish and/or English.

The contributions can be:

- **Reviews:** 10,000 to 11,000 words of text, including charts and references. Justified references would be specially valued. (current and selected from among 70 works)
- **Research:** 8,000 to 9,500 words of text, including title, abstracts, descriptors, charts and references.
- **Reports, studies and proposals:** 8,000 to 9,500 words of text, including title, abstracts, charts and references.

2.3. *Characteristics of the content*

All works presented for publication in «Sophia» must comply with the characteristics of scientific research:

- Be original, unpublished and relevant
- Address issues that respond to current problems and needs
- Address issues that respond to current problems and needs
- Contribute to the development of scientific knowledge in the field of Philosophy of Education and its related areas
- Use adequate, clear, precise and comprehensible language
- Not have been published in any medium or in the process of arbitration or publication.

Depending on the relevance of the article, it will be considered as special contributions and will occasionally be published:

- Works that exceed the stated extent
- Works that do not correspond to the subject of the reflection foreseen for the respective issue



2.4. Periodicity

«Sophia» has a biannual periodicity (20 articles per year), published in January and July and counts by number with two sections of five articles each, the first referring to a **Monographic** topic prepared in advance and with thematic editors and the second, a section of **Miscellaneous**, composed of varied contributions within the theme of the publication.

3. Presentation, Structure and Submission of the Manuscripts

Texts will be presented in Arial 12 font, single line spacing, complete justification and no tabs or blank spaces between paragraphs. Only large blocks (title, authors, summaries, keywords, credits and headings) will be separated with a blank space. The page should be 2 centimeters in all its margins.

Papers must be submitted in a Microsoft Word document (.doc or .docx), requiring that the file be anonymized in File Properties, so that the author/s identification does not appear.

Manuscripts must be submitted only and exclusively through the OJS (Open Journal System), in which all authors must previously register. Originals sent via email or other interfaces are not accepted.

3.1. Structure of the manuscript

For those works that are empirical investigations, the manuscripts will follow the IMRDC structure, being optional the Notes and Supports. Those papers that, on the contrary, deal with reports, studies, proposals and reviews may be more flexible in their epigraphs, particularly in material and methods, analysis, results, discussion and conclusions. In all typologies of works, references are mandatory.

A. EMPIRICAL RESEARCH

Its purpose is to contribute to the progress of knowledge through original information, following the IMRDC structure: Introduction (objectives, previous literature). Materials and methods, Analysis and Results, Discussion, integration and conclusions. Following the criteria set by UNESCO, it is these types of scientific texts are also called as: “original memories”

The recommended structure, especially in works that include empirical research, is the following:

1) Title (Spanish) /Title (English): Concise but informative, in Spanish on the first line and in English on the second. A maximum of 85 characters with spaces are accepted. The title is not only the responsibility of the authors, changes being able to be proposed by the Editorial Board.

2) Identification data: Of each of the authors, organized by priority. A maximum of 3 authors will be accepted per original, although there may be excep-



tions justified by the topic, its complexity and extent. Next to the names must follow the professional category, work center, email of each author and complete ORCID number. Aspects that must be included in the Cover Letter, must also be uploaded to the OJS system of the journal, in the Metadata section and /or in a word document attached to the file containing the work proposed for the evaluation.

3) Abstract (Spanish) / Abstract (English): It will have a minimum length of 210 and a maximum of 220 words in Spanish; and 200 and maximum 210 words in English. The abstract will describe concisely and in this order: 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written "This paper analyzes...". In the case of the abstract, the use of automatic translators will not be accepted due to their poor quality.

4) Keywords (Spanish) / Keywords (English): A maximum of 6 keywords must be presented for each language version directly related to the subject of the work. The use of the key words set out in UNESCO's Thesaurus and of the journal itself, located in the following link: https://sophia.ups.edu.ec/tesauro_sophia.php, will be positively valued.

5) Introduction and state of the issue: It should include the problem statement, context of the problem, justification, rationale and purpose of the study, using bibliographical citations, as well as the most significant and current literature on the topic at national and international level..

6) Material and methods: It must be written so that the reader can easily understand the development of the research. If applicable, it will describe the methodology, the sample and the form of sampling, as well as the type of statistical analysis used. If it is an original methodology, it is necessary to explain the reasons that led to its use and to describe its possible limitations.

7) Analysis and results: It will try to highlight the most important observations, describing them, without making value judgments, the material and methods used. They will appear in a logical sequence in the text and the essential charts and figures avoiding the duplication of data.

8) Discussion and conclusions: Summarize the most important findings, relating the observations themselves with relevant studies, indicating contributions and limitations, without adding data already mentioned in other sections. Also, the discussion and conclusions section should include the deductions and lines for future research.

9) Supports and acknowledgments (optional): The Council Science Editors recommends the author (s) to specify the source of funding for the research. Priority will be given to projects supported by national and international competitive projects. In any case, for the scientific evaluation of the manuscript, it should be only anonymized with XXXX for its initial evaluation, in order not to identify authors and research teams, which should be explained in the Cover Letter and later in the final manuscript.

10) The notes (optional) will go, only if necessary, at the end of the article (before the references). They must be manually annotated, since the system of footnotes or the end of Word is not recognized by the layout systems. The



numbers of notes are placed in superscript, both in the text and in the final note. The numbers of notes are placed in superscript, both in the text and in the final note. No notes are allowed that collect simple bibliographic citations (without comments), as these should go in the references.

11) References: Bibliographical citations should be reviewed in the form of references to the text. Under no circumstances should references not mentioned in the text be included. Their number should be sufficient to contextualize the theoretical framework with current and important criteria. They will be presented alphabetically by the first last name of the author.

B. REVIEWS

Literature reviews are based on the analysis of major publications on a given topic; Its objective is to define the current state of the problem and to evaluate the investigations carried out. Its structure responds to the phases of the theme/problem, contributions of researchers or teams, changes in theory or main theoretical currents; unsolved problems; current and future trends (Giordanino, 2011). According to UNESCO, this type of work is also known as “recapitulative studies”

1) Title (Spanish) /Title (English): Concise but informative, in Spanish on the first line and in English on the second. A maximum of 85 characters with spaces are accepted. The title is not only the responsibility of the authors, changes being able to be proposed by the Editorial Board.

2) Identification data: Of each of the authors, organized by priority. A maximum of 3 authors will be accepted per original, although there may be exceptions justified by the topic, its complexity and extent. Next to the names must follow the professional category, work center, email of each author and complete ORCID number. Aspects that must be included in the Cover Letter, must also be uploaded to the OJS system of the journal, in the Metadata section and /or in a word document attached to the file containing the work proposed for the evaluation.

3) Abstract (Spanish) / Abstract (English): It will have a minimum length of 210 and a maximum of 220 words in Spanish; and 200 and maximum 210 words in English. The abstract will describe concisely and in this order: 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written “This paper analyzes...” In the case of the abstract, the use of automatic translators will not be accepted due to their poor quality.

4) Keywords (Spanish) / Keywords (English): A maximum of 6 keywords must be presented for each language version directly related to the subject of the work. The use of the key words set out in UNESCO’s Thesaurus and of the Journal itself will be positively valued.

5) Introduction: It should include a brief presentation of the topic, the formulation of the purpose or objective of the study, the context of the problem and the formulation of the problem that is proposed, the presentation



of the idea to be defended, the justification explaining the importance, the relevance of the study; the methodological framework used, and finally, a brief description of the structure of the document. In the justification it is necessary to use bibliographical citations as well as the most significant and current literature on the subject at national and international level.

6) Body or development of the document: It implies putting into practice throughout the text, a critical attitude that should tend towards the interpellation, in order to attract the attention of the topic and the problem treated. The writer must generate in the reader the capacity to identify the dialogical intention of the proposal and to promote an open discussion.

7) Conclusions: Objectively state the results and findings. Offer a vision of the implications of the work, the limitations, the tentative response to the problem, the relations with the objective of the research and the possible lines of continuity (to fulfill this objective it is suggested not to include all the results obtained in the research). The conclusions should be duly justified according to the research carried out. The conclusions may be associated with the recommendations, evaluations, applications, suggestions, new relations and accepted or rejected hypotheses.

8) Bibliography: It is the set of works used in the structuring of the scientific text. It should include only the reference of the works used in the research. Bibliographical references should be ordered alphabetically and conform to the international APA standards, in their sixth edition.

3.2. Guidelines for references

PERIODIC PUBLICATIONS

Journal article (author): Valdés-Pérez, D. (2016). Valdés-Pérez, D. (2016). Incidencia de las técnicas de gestión en la mejora de decisiones administrativas [Impact of Management Techniques on the Improvement of Administrative Decisions]. *Retos*, 12(6), 199-2013. <https://doi.org/10.17163/ret.n12.2016.05>

Journal Article (Up to six authors): Ospina, M.C., Alvarado, S.V., Fefferman, M., & Llanos, D. (2016). Introducción del dossier temático “Infancias y juventudes: violencias, conflictos, memorias y procesos de construcción de paz” [Introduction of the thematic dossier “Infancy and Youth: Violence, Conflicts, Memories and Peace Construction Processes”]. *Universitas*, 25(14), 91-95. <https://doi.org/10.17163/uni.n25.%25x>

Journal article (more than six authors): Smith, S.W., Smith, S.L. Pieper, K.M., Yoo, J.H., Ferrys, A.L., Downs, E.,... Bowden, B. (2006). Altruism on American Television: Examining the Amount of, and Context Surrounding, Acts of Helping and Sharing. *Journal of Communication*, 56(4), 707-727. <https://doi.org/10.1111/j.1460-2466.2006.00316.x>

Journal article (without DOI): Rodríguez, A. (2007). Desde la promoción de salud mental hacia la promoción de salud: La concepción de lo comunitario en la implementación de proyectos sociales. *Alteridad*, 2(1), 28-40. (<https://go.gl/zDb3Me>) (2017-01-29).



BOOKS AND BOOK CHAPTERS

Full books: Cuéllar, J.C., & Moncada-Paredes, M.C. (2014). *El peso de la deuda externa ecuatoriana*. Quito: Abya-Yala.

Chapter of book: Zambrano-Quñones, D. (2015). El ecoturismo comunitario en Manglaralto y Colonche. En V.H. Torres (Ed.), *Alternativas de Vida: Trece experiencias de desarrollo endógeno en Ecuador* (pp. 175-198). Quito: Abya-Yala.

DIGITAL MEDIA

Pérez-Rodríguez, M.A., Ramírez, A., & García-Ruiz, R. (2015). La competencia mediática en educación infantil. *Análisis del nivel de desarrollo en España*. *Universitas Psychologica*, 14(2), 619-630. <https://doi.org.10.11144/Javeriana.upsy14-2.cmei>

It is prescriptive that all quotations that have DOI (Digital Object Identifier System) are reflected in the References (can be obtained at <http://goo.gl/gfruh1>). All journals and books that do not have DOI should appear with their respective link (in their online version, if they have it, shortened by Bitly: <https://bitly.com/>) and date of consultation in the indicated format.

Journal articles should be presented in English, except for those in Spanish and English, in which case it will be displayed in both languages using brackets. All web addresses submitted must be shortened in the manuscript, except for the DOI that must be in the indicated format (<https://doi.org/XXX>).

283



3.3. Epigraphs, Figures and Charts

The epigraphs of the body of the article will be numbered in Arabic. They should go without a full box of capital letters, neither underlined nor bold. The numbering must be a maximum of three levels: 1. / 1.1. / 1.1.1. A carriage return will be established at the end of each numbered epigraph.

The charts must be included in the text in Word format according to order of appearance, numbered in Arabic and subtitled with the description of the content.

The graphics or figures will be adjusted to the minimum number required and will be presented incorporated in the text, according to their order of appearance, numbered in Arabic and subtitled with the abbreviated description. Their quality should not be less than 300 dpi, and it may be necessary to have the graph in TIF, PNG or JPEG format.

4. Submission Process

The receipt of articles is permanent, however, considering that the publication of the Sophia Journal is bi-annual, the manuscripts must be sent at least one period before the date stipulated in the corresponding Call.

The manuscripts must be sent through the OJS (Open Journal System) system of the journal, for which it is necessary that the author previously registers in

the respective space (enter in the following link: <http://sophia.ups.edu.ec/index.php/sophia/user/register>, complete the form and follow each of the suggested steps).

The two documents that must be sent are:

1) Presentation and cover (Use official model), which will appear:

Title. In Spanish in the first line, in letter Arial 14, with bold and centered, with a maximum of 85 characters with space. In English in the second line, in letter Arial 14, in italics and bold.

Full names and surnames of the authors. Organized in order of priority, a maximum of 3 authors are accepted per original, although there may be exceptions justified by the topic, its complexity and extent. Each name must include the name of the institution in which he/she works as well as the city, country, email and ORCID number.

Abstract (Spanish) It will have a minimum length of 210 and a maximum of 220 words. It must include 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written "The present paper analyzes..."

Abstract. Summary with all its components, translated into English and in cursive. Do not use automatic translation systems.

Keywords (Spanish): 6 standardized terms preferably of a single word and of the UNESCO and the Journal's Thesaurus separated by commas (,).

Keywords. The 6 terms above translated into English and separated by comma (,). Do not use automatic translation systems.

In addition, a statement must be included (using a template called: Presentation) in which it is explained that the submitted manuscript is an original contribution, not sent or being evaluated in another journal, confirmation of the signatory authors, acceptance (if applicable) of formal changes in the manuscript according to the norms and partial transfer of rights to the publisher. This document must be signed and recorded through the OJS system, in the section: "Complementary files".

2) Manuscript totally anonymized, according to the guidelines referred in precedence.

All authors must register with their credits on the OJS platform, although only one of them will be responsible for correspondence. No author can submit or have in review two manuscripts simultaneously, estimating an absence of four consecutive numbers (2 years).

5. Publication interval

The interval between receipt and publication of an article is 7 months (210 days).



Normas de Publicación en «Sophia»



ISSN: 1390-3861 / e-ISSN: 1390-8626

1. Información general

«Sophia» es una publicación científica de la Universidad Politécnica Salesiana de Ecuador, editada desde junio de 2006 de forma ininterrumpida, con periodicidad fija semestral, especializada en Filosofía de la Educación y sus líneas interdisciplinarias como Epistemología, Deontología, Estética, Estudios Críticos, Hermenéutica, Axiología, Ontología, Antropología Filosófica, Sociología, Analítica Filosófica... vinculadas al ámbito de la educación.

Es una revista científica arbitrada, que utiliza el sistema de evaluación externa por expertos (*peer-review*), bajo metodología de pares ciegos (*double-blind review*), conforme a las normas de publicación de la American Psychological Association (APA). El cumplimiento de este sistema permite garantizar a los autores un proceso de revisión objetivo, imparcial y transparente, lo que facilita a la publicación su inclusión en bases de datos, repositorios e indexaciones internacionales de referencia.

«Sophia» se encuentra indexada en Emerging Sources Citation Index (ESCI) de Web of Science; en Scientific Electronic Library Online (SciELO); en el Sistema de Información Científica (REDALYC); en el directorio y catálogo selectivo del Sistema Regional de Información en Línea para Revistas Científicas de América Latina, el Caribe, España y Portugal (LATINDEX), en la Matriz de Información para el Análisis de Revistas (MIAR), en Clasificación Integrada de Revistas Científicas (C.I.R.C), en Academic Resource Index (Research Bible), en la Red Iberoamericana de Innovación y Conocimiento Científico (REDIB), en el Portal de difusión de la producción científica (Dialnet); en Bibliografía Latinoamericana en Revistas de Investigación Científica y Social (BIBLAT); en el Directorio de Revistas de Acceso Abierto DOAJ y en repositorios, bibliotecas y catálogos especializados de Iberoamérica.

La revista se edita en doble versión: impresa (ISSN: 1390-3861) y electrónica (e-ISSN: 1390-8626), en español y en inglés, siendo identificado además cada trabajo con un DOI (Digital Object Identifier System).

285



2. Alcance y política

2.1. Temática

Contribuciones originales en materia de Filosofía de la Educación, así como áreas afines: Epistemología, Deontología, Estética, Estudios Críticos, Hermenéutica, Axiología, Ontología, Antropología Filosófica, Sociología, Analítica Filosófica,... y todas aquellas disciplinas conexas interdisciplinariamente con una reflexión filosófica sobre la educación.

2.2. Aportaciones

«Sophia» edita estudios críticos, informes, propuestas, así como selectas revisiones de la literatura (*state-of-the-art*) en relación con la Filosofía de la Educación, aceptando asimismo trabajos de investigación empírica, redactados en español y en inglés.

Las aportaciones en la revista pueden ser:

- **Revisiones:** 10.000 a 11.000 palabras de texto, incluidas tablas y referencias. Se valorará especialmente las referencias justificadas, actuales y selectivas de alrededor de unas 70 obras.
- **Investigaciones:** 8.000 a 9.500 palabras de texto, incluyendo título, resúmenes, descriptores, tablas y referencias.
- **Informes, estudios y propuestas:** 8.000 a 9.500 palabras de texto, incluyendo título, resúmenes, tablas y referencias.

2.3. Características del contenido

Todos los trabajos presentados para la publicación en «Sophia» deberán cumplir con las características propias de una investigación científica:

- Ser originales, inéditos y relevantes
- Abordar temáticas que respondan a problemáticas y necesidades actuales
- Aportar para el desarrollo del conocimiento científico en el campo de la Filosofía de la Educación y sus áreas afines
- Utilizar un lenguaje adecuado, claro, preciso y comprensible
- No haber sido publicados en ningún medio ni estar en proceso de arbitraje o publicación.

Dependiendo de la relevancia y pertinencia del artículo, se considerarán como contribuciones especiales y ocasionalmente se publicarán:

- Trabajos que superen la extensión manifestada
- Trabajos que no se correspondan con el tema objeto de la reflexión prevista para el número respectivo



2.4 Periodicidad

«Sophia» tiene periodicidad semestral (20 artículos por año), publicada en los meses de enero y julio; y cuenta por número con dos secciones de cinco artículos cada una, la primera referida a un tema **Monográfico** preparado con antelación y con editores temáticos; la segunda, una sección de **Misceláneas**, compuesta por aportaciones variadas dentro de la temática de la publicación.

3. Presentación, estructura y envío de los manuscritos

Los trabajos se presentarán en tipo de letra Arial 12, interlineado simple, justificado completo y sin tabuladores ni espacios en blanco entre párrafos. Se separarán con un espacio en blanco los grandes bloques (título, autores, resúmenes, descriptores, créditos y epígrafes). La página debe tener 2 centímetros en todos sus márgenes.

Los trabajos deben presentarse en documento de Microsoft Word (.doc o .docx), siendo necesario que el archivo esté anonimizado en Propiedades de Archivo, de forma que no aparezca la identificación de autor/es.

Los manuscritos deben ser enviados única y exclusivamente a través del OJS (Open Journal System), en el cual todos los autores deben darse de alta previamente. No se aceptan originales enviados a través de correo electrónico u otra interfaz.

287



3.1. Estructura del manuscrito

Para aquellos trabajos que se traten de investigaciones de carácter empírico, los manuscritos seguirán la estructura IMRDC, siendo opcionales los epígrafes de Notas y Apoyos. Aquellos trabajos que por el contrario se traten de informes, estudios, propuestas y revisiones sistemáticas podrán ser más flexibles en sus epígrafes, especialmente en Material y métodos; Análisis y resultados; Discusión y conclusiones. En todas las tipologías de trabajos son obligatorias las Referencias.

A. INVESTIGACIONES EMPÍRICAS

Su objetivo es contribuir al progreso del conocimiento mediante información original, sigue la estructura IMRDC: Introducción (objetivos, literatura previa), Materiales y métodos; Análisis y Resultados; Discusión, integración y conclusiones. Siguiendo los criterios planteados por la Unesco, es este tipo de textos científicos se llaman también como: “memorias originales”

La estructura recomendada, especialmente en trabajos que incluyen investigaciones empíricas, es la siguiente:

1) Título (español) / Title (inglés): Conciso pero informativo, en castellano en primera línea y en inglés en segunda. Se aceptan como máximo 85 caracteres con espacio. El título no solo es responsabilidad de los autores, pudiéndose proponer cambios por parte del Consejo Editorial.



2) Datos de Identificación: Nombres y apellidos completos de cada uno de los autores, organizados por orden de prelación. Se aceptarán como máximo 3 autores por original, aunque pudieren existir excepciones justificadas por el tema, su complejidad y extensión. Junto a los nombres deberá incluirse, el nombre de la institución en la que trabaja así como la ciudad, el país, el correo electrónico y número completo de ORCID de cada autor aspectos que deberán constar de modo obligatorio en la Carta de Presentación, además deberán ser cargados en el sistema OJS de la revista, en la sección Metadatos y/o en un documento word adjunto al archivo que contiene el trabajo que se propone para la evaluación.

3) Resumen (español) / Abstract (inglés): Tendrá como extensión mínima de 210 y máxima de 220 palabras en español; y de 200 y máximo de 210 palabras en inglés. El resumen describirá de forma concisa y en este orden: 1) Justificación del tema; 2) Objetivos; 3) Metodología y muestra; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”. En el caso del abstract no se admitirá el empleo de traductores automáticos por su pésima calidad.

4) Descriptores (español) / Keywords (inglés): Se deben exponer máximo 6 términos por cada versión idiomática relacionados directamente con el tema del trabajo. Será valorado positivamente el uso de las palabras claves expuestas en el Thesaurus de la UNESCO y en el de la propia revista localizado en el siguiente enlace: https://sophia.ups.edu.ec/tesauro_sophia.php

5) Introducción y estado de la cuestión: Debe incluir el planteamiento del problema, el contexto de la problemática, la justificación, fundamentos y propósito del estudio, utilizando citas bibliográficas, así como la literatura más significativa y actual del tema a escala nacional e internacional.

6) Material y métodos: Debe ser redactado de forma que el lector pueda comprender con facilidad el desarrollo de la investigación. En su caso, describirá la metodología, la muestra y la forma de muestreo, así como se hará referencia al tipo de análisis estadístico empleado. Si se trata de una metodología original, es necesario exponer las razones que han conducido a su empleo y describir sus posibles limitaciones.

7) Análisis y resultados: Se procurará resaltar las observaciones más importantes, describiéndose, sin hacer juicios de valor, el material y métodos empleados. Aparecerán en una secuencia lógica en el texto y las tablas y figuras imprescindibles evitando la duplicidad de datos.

8) Discusión y conclusiones: Resumirá los hallazgos más importantes, relacionando las propias observaciones con estudios de interés, señalando aportaciones y limitaciones, sin redundar datos ya comentados en otros apartados. Asimismo, el apartado de discusión y conclusiones debe incluir las deducciones y líneas para futuras investigaciones.

9) Apoyos y agradecimientos (opcionales): El Council Science Editors recomienda a los autor/es especificar la fuente de financiación de la investigación. Se considerarán prioritarios los trabajos con aval de proyectos competiti-

vos nacionales e internacionales. En todo caso, para la valoración científica del manuscrito, este debe ir anonimizado con XXXX solo para su evaluación inicial, a fin de no identificar autores y equipos de investigación, que deben ser explicitados en la Carta de Presentación y posteriormente en el manuscrito final.

10) Las notas (opcionales) irán, solo en caso necesario, al final del artículo (antes de las referencias). Deben anotarse manualmente, ya que el sistema de notas al pie o al final de Word no es reconocido por los sistemas de maquetación. Los números de notas se colocan en superíndice, tanto en el texto como en la nota final. No se permiten notas que recojan citas bibliográficas simples (sin comentarios), pues éstas deben ir en las referencias.

11) Referencias: Las citas bibliográficas deben reseñarse en forma de referencias al texto. Bajo ningún caso deben incluirse referencias no citadas en el texto. Su número debe ser suficiente para contextualizar el marco teórico con criterios de actualidad e importancia. Se presentarán alfabéticamente por el primer apellido del autor.

289



B. REVISIONES

Las revisiones de literatura se basan en el análisis de las principales publicaciones sobre un tema determinado; su objetivo es definir el estado actual del problema y evaluar las investigaciones realizadas. Su estructura responde a las fases del tema/problema, aportes de investigadores o equipos, cambios en la teoría o las corrientes teóricas principales; problemas sin resolver; tendencias actuales y futuras (Giordanino, 2011). De acuerdo con la UNESCO, este tipo de trabajos se conocen también como: “estudios recapitulativos”

1) Título (español) / Title (inglés): El título del artículo deberá ser breve, interesante, claro, preciso y atractivo para despertar el interés del lector. Conciso pero informativo, en castellano en la primera línea y en inglés en la segunda línea. Se aceptan como máximo 85 caracteres con espacio. El título no solo es responsabilidad de los autores, también los Miembros del Consejo Editorial puede proponer cambios al título del documento.

2) Datos de Identificación: Nombres y apellidos completos de cada uno de los autores, organizados por orden de prelación. Se aceptarán como máximo 3 autores por original, aunque pudieren existir excepciones justificadas por el tema, su complejidad y extensión. Junto a los nombres deberá incluirse, el nombre de la institución en la que trabaja así como la ciudad, el país, el correo electrónico y número completo de ORCID de cada autor aspectos que deberán constar de modo obligatorio en la Carta de Presentación, además deberán ser cargados en el sistema OJS de la revista, en la sección Metadatos y/o en un documento word adjunto al archivo que contiene el trabajo que se propone para la evaluación.

3) Resumen (español) / Abstract (inglés): Tendrá como extensión mínima de 210 y máxima de 220 palabras en español; y de 200 y máximo de 210 palabras en inglés. El resumen describirá de forma concisa y en este orden: 1) Justificación

del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”. En el caso del abstract no se admitirá el empleo de traductores automáticos por su pésima calidad.

4) Descriptores (español) / Keywords (inglés): Se deben exponer máximo 6 términos por cada versión idiomática relacionados directamente con el tema del trabajo. Será valorado positivamente el uso de las palabras claves expuestas en el Thesaurus de la UNESCO y en el de la propia revista.

5) Introducción: Deberá incluir una presentación breve del tema, la formulación del propósito u objetivo del estudio, el contexto de la problemática y la formulación del problema que se propone enfrentar, la presentación de la idea a defender, la justificación que explica la importancia, la actualidad y la pertinencia del estudio; el marco metodológico utilizado, y finalmente, una breve descripción de la estructura del documento. En la justificación es necesario utilizar citas bibliográficas así como la literatura más significativa y actual del tema a escala nacional e internacional.

6) Cuerpo o desarrollo del documento: Implica poner en práctica a lo largo de toda la exposición, una actitud crítica que deberá tender hacia la interpelación, a efectos de concitar la atención del tema y el problema tratados. El escritor deberá generar en el lector la capacidad de identificar la intención dialógica de la propuesta y propiciar en él una discusión abierta.

7) Conclusiones: Expone de manera objetiva los resultados y hallazgos; ofrece una visión de las implicaciones del trabajo, las limitaciones, la respuesta tentativa al problema, las relaciones con el objetivo de la investigación y las posibles líneas de continuidad (para cumplir con este objetivo se sugiere no incluir todos los resultados obtenidos en la investigación). Las conclusiones deberán ser debidamente justificadas de acuerdo con la investigación realizada. Las conclusiones podrán estar asociadas con las recomendaciones, evaluaciones, aplicaciones, sugerencias, nuevas relaciones e hipótesis aceptadas o rechazadas.

8) Bibliografía: Es el conjunto de obras utilizadas en la estructuración del texto científico. Deberá incluir únicamente la referencia de los trabajos utilizados en la investigación. Las referencias bibliográficas deberán ordenarse alfabéticamente y ajustarse a las normas internacionales APA, en su sexta edición.

3.2. Normas para las referencias

PUBLICACIONES PERIÓDICAS

Artículo de revista (un autor): Valdés-Pérez, D. (2016). Incidencia de las técnicas de gestión en la mejora de decisiones administrativas [Impact of Management Techniques on the Improvement of Administrative Decisions]. *Retos*, 12(6), 199-2013. <https://doi.org/10.17163/ret.n12.2016.05>

Artículo de revista (hasta seis autores): Ospina, M.C., Alvarado, S.V., Fefferman, M., & Llanos, D. (2016). Introducción del dossier temático “Infancias



y juventudes: violencias, conflictos, memorias y procesos de construcción de paz” [Introduction of the thematic dossier “Infancy and Youth: Violence, Conflicts, Memories and Peace Construction Processes”]. *Universitas*, 25(14), 91-95. <https://doi.org/10.17163/uni.n25.%25x>

Artículo de revista (más de seis autores): Smith, S.W., Smith, S.L. Pieper, K.M., Yoo, J.H., Ferrys, A.L., Downs, E.,... Bowden, B. (2006). Altruism on American Television: Examining the Amount of, and Context Surrounding. Acts of Helping and Sharing. *Journal of Communication*, 56(4), 707-727. <https://doi.org/10.1111/j.1460-2466.2006.00316.x>

Artículo de revista (sin DOI): Rodríguez, A. (2007). Desde la promoción de salud mental hacia la promoción de salud: La concepción de lo comunitario en la implementación de proyectos sociales. *Alteridad*, 2(1), 28-40. (<https://goo.gl/zDb3Me>) (2017-01-29).

LIBROS Y CAPÍTULOS DE LIBRO

291



Libros completos: Cuéllar, J.C., & Moncada-Paredes, M.C. (2014). *El peso de la deuda externa ecuatoriana*. Quito: Abya-Yala.

Capítulos de libro: Zambrano-Quiñones, D. (2015). *El ecoturismo comunitario en Manglaralto y Colonche*. En V.H. Torres (Ed.), *Alternativas de Vida: Trece experiencias de desarrollo endógeno en Ecuador* (pp. 175-198). Quito: Abya-Yala.

MEDIOS ELECTRÓNICOS

Pérez-Rodríguez, M.A., Ramírez, A., & García-Ruiz, R. (2015). La competencia mediática en educación infantil. Análisis del nivel de desarrollo en España. *Universitas Psychologica*, 14(2), 619-630. <https://doi.org/10.11144/Javeriana.upsy14-2.cmei>

Es prescriptivo que todas las citas que cuenten con DOI (Digital Object Identifier System) estén reflejadas en las Referencias (pueden obtenerse en <http://goo.gl/gfruh1>). Todas las revistas y libros que no tengan DOI deben aparecer con su link (en su versión on-line, en caso de que la tengan, acortada, mediante Bitly: <https://bitly.com/> y fecha de consulta en el formato indicado.

Los artículos de revistas deben ser expuestos en idioma inglés, a excepción de aquellos que se encuentren en español e inglés, caso en el que se expondrá en ambos idiomas utilizando corchetes. Todas las direcciones web que se presenten tienen que ser acortadas en el manuscrito, a excepción de los DOI que deben ir en el formato indicado (<https://doi.org/XXX>).

3.3. Epígrafes, tablas y gráficos

Los epígrafes del cuerpo del artículo se numerarán en arábigo. Irán sin caja completa de mayúsculas, ni subrayados, ni negritas. La numeración ha de

ser como máximo de tres niveles: 1. / 1.1. / 1.1.1. Al final de cada epígrafe numerado se establecerá un retorno de carro.

Las tablas deben presentarse incluidas en el texto en formato Word según orden de aparición, numeradas en arábigo y subtituladas con la descripción del contenido.

Los gráficos o figuras se ajustarán al número mínimo necesario y se presentarán incorporadas al texto, según su orden de aparición, numeradas en arábigo y subtituladas con la descripción abreviada. Su calidad no debe ser inferior a 300 ppp, pudiendo ser necesario contar con el gráfico en formato TIFF, PNG o JPEG.

4. *Proceso de envío*

La recepción de artículos es permanente, sin embargo, considerando que la publicación de la Revista Sophia es semestral, el envío de los manuscritos deberá efectuarse al menos un período antes de la fecha estipulada en la Convocatoria correspondiente.

Los manuscritos deberán remitirse a través del sistema OJS (Open Journal System) de la revista, para lo cual es necesario que el autor se registre previamente en el espacio respectivo (ingrese en el siguiente link: <http://sophia.ups.edu.ec/index.php/sophia/user/register>, complemente el formulario y siga cada uno de los pasos que se sugieren).

Los dos documentos que deben ser enviados son:

1) Carta de presentación o Cover letter (usar modelo oficial), en la que aparecerán:

Título. En castellano en la primera línea, en letra Arial 14, con negrita y centrado, con un máximo de 85 caracteres con espacio. En inglés en la segunda línea, en letra Arial 14, en cursiva y con negrita.

Nombres y apellidos completos de los autores. Organizados por orden de prelación, se aceptan como máximo 3 autores por original, aunque pudieren existir excepciones justificadas por el tema, su complejidad y extensión. Junto a cada uno de los nombres deberá incluirse, el nombre de la institución en la que trabaja así como la ciudad, el país, el correo electrónico y número de ORCID.

Resumen. Tendrá como extensión mínima 210 y máxima 220 palabras. El resumen describirá de forma concisa y en este orden: 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”.

Abstract. Resumen con todos sus componentes, traducido al inglés y en letra cursiva. No utilizar sistemas de traducción automáticos.

Descriptor. Máximo 6 términos estandarizados preferiblemente de una sola palabra y del Thesaurus de la UNESCO y de la propia revista, separados por coma (,).



Keywords. Los 6 términos antes referidos traducidos al inglés y separados por coma (,). No utilizar sistemas de traducción automáticos.

Además, se deberá incluir una: **Declaración** (usar modelo denominado: Presentación) en la que se explica que el manuscrito enviado es una aportación original, no enviado ni en proceso de evaluación en otra revista, confirmación de las autorías firmantes, aceptación (si procede) de cambios formales en el manuscrito conforme a las normas y cesión parcial de derechos a la editorial. Este documento deberá ser firmado y consignado a través del sistema OJS, en la sección: **“Ficheros complementarios”**.

2) Manuscrito totalmente anonimizado, conforme a las normas referidas en precedencia.

Todos los autores han de darse de alta, con sus créditos, en la plataforma OJS, si bien uno solo de ellos será el responsable de correspondencia. Ningún autor podrá enviar o tener en revisión dos manuscritos de forma simultánea, estimándose una carencia de cuatro números consecutivos (2 años).

293



5. Intervalo de publicación

(El tamaño y estilo de la letra tal como se encuentra el numeral 4 (Proceso de envío)

El intervalo comprendido entre la recepción y la publicación de un artículo es de 7 meses (210 días).

Indications for External Reviewers of «Sophia»

The **Board of External Reviewers of «Sophia»** is an independent collegiate body whose purpose is to guarantee the excellence of this scientific publication, because the blind evaluation - based exclusively on the quality of the contents of the manuscripts and carried out by experts of recognized International prestige in the field - is, without a doubt, the best guarantee for the advancement of science and to preserve in this header an original and valuable scientific production.

To this end, the **Board of External Reviewers** is made up of several scholars and international scientists specialized in **Education**, essential to select the articles of the greatest impact and interest for the international scientific community. This in turn allows that all the articles selected to publish in «**Sophia**» have an academic endorsement and objectifiable reports on the originals.

Of course, all reviews in «**Sophia**» use the internationally standardized system of double-blind peer evaluation that guarantees the anonymity of manuscripts and reviewers. As a measure of transparency, the complete lists of reviewers are published on the official website of the journal <http://Sophia.ups.edu.ec/>)

1. Criteria for acceptance/rejection of manuscript evaluation

The editorial team of «**Sophia**» selects those that are considered more qualified in the subject of the manuscript from the list of reviewers of the Board of Reviewers. While the publication requires the maximum collaboration of reviewers to expedite the evaluations and reports on each original, acceptance of the review must be linked to:

- a. **Expertise.** Acceptance necessarily entails the possession of competences in the specific theme of the article to be evaluated.
- b. **Availability.** Reviewing an original takes time and involves careful reflection on many aspects.
- c. **Conflict of interests.** In case of identification of the authorship of the manuscript (despite their anonymity), excessive academic or family closeness to their authors, membership in the same University, Department, Research Group, Thematic Network, Research Projects, joint publications with authors... or any other type of connection or conflict / professional proximity; The reviewer must reject the publisher's invitation for review.
- d. **Commitment of confidentiality.** Reception of a manuscript for evaluation requires the Reviewer to express a commitment of confidentiality, so that it cannot be divulged to a third party throughout the process.



In the event that the reviewer cannot carry out the activity for some of these reasons or other justifiable reasons, he/she must notify the publisher by the same route that he/she has received the invitation, specifying the reasons for rejection.

2. General criteria for the evaluation of manuscripts

a) Topic

In addition to being valuable and relevant to the scientific community, the topic that is presented in the original must be limited and specialized in time and space, without excessive localism.

b) Redaction

The critical assessment in the review report must be objectively written, providing content, quotes or references of interest to support its judgment.

295



c) Originality

As a fundamental criterion of quality, an article must be original, unpublished and suitable. In this sense, reviewers should answer these three questions in the evaluation:

- Is the article sufficiently novel and interesting to justify publication?
- Does it contribute anything to the knowledge canon?
- Is the research question relevant?

A quick literature search using repositories such as Web of Knowledge, Scopus and Google Scholar to see if the research has been previously covered, may be helpful.

d) Structure

Manuscripts that refer to «Sophia» must follow the IMRDC structure, except those that are literature reviews or specific studies. In this sense, the originals must contain summary, introduction, methodology, results, discussion and conclusion.

- The **title, abstract, and keywords** should accurately describe the content of the article.
- The **review of the literature** should summarize the state of the question of the most recent and adequate research for the presented work. It will be especially evaluated with criteria of suitability and that the references are to works of high impact - especially in



WoS, Scopus, Scielo, etc. It should also include the general explanation of the study, its central objective and the followed methodological design.

- In case of research, in the **materials and methods**, the author must specify how the data, the process and the instruments used to respond to the hypothesis, the validation system, and all the information necessary to replicate the study are collected.
- **Results** must be clearly specified in logical sequence. It is important to check if the figures or charts presented are necessary or, if not, redundant with the content of the text.
- In the **discussion**, the data obtained should be interpreted in the light of the literature review. Authors should include here if their article supports or contradicts previous theories. The conclusions will summarize the advances that the research presents in the area of scientific knowledge, the future lines of research and the main difficulties or limitations for carrying out the research.
- **Language:** It will be positively assessed if the language used facilitates reading and is in favor of the clarity, simplicity, precision and transparency of the scientific language. The Reviewer should not proceed to correction, either in Spanish or English, but will inform the Editors of these grammatical or orthographical and typographical errors.
- Finally, a thorough **review of the references** is required in case any relevant work has been omitted. The references must be precise, citing within the logic of the subject at study, its main works as well as the documents that most resemble the work itself, as well as the latest research in the area.

3. Relevant valuation dimensions

For the case of empirical research articles, «**Sophia**» uses an evaluation matrix of each original that responds to the editorial criteria and to compliance with the publication guidelines. In this sense, the reviewers must attend to the qualitative-quantitative assessment of each of the aspects proposed in this matrix with criteria of objectivity, reasoning, logic and expertise.

If the original is a review of the literature (status of the matter) or other type of study (reports, proposals, experiences, among others), the Editorial Board will send to the reviewers a different matrix, including the characteristics of Structure of this type of originals:

STUDIES, REPORTS, PROPOSALS AND REVIEW	
Valuable items	Score
01. Relevancy of the title (clarity, precision and with a maximum of 85 characters).	0/5
02. They summarize (In an alone paragraph and without epigraphs, minimum / minimal: 210-220 words).	0/5
03. Introduction (brief presentation of the topic; formulation of the problem; it designs to defending or hypothesis to demonstrating; I target; importance of the topic; current importance; methodology; structure of the document).	0/5
04. Review of the bibliographical foundation (Beside using current bibliography to consider the incorporation of Sophia's documents).	0/10
05. Structure and organization of the article (argumentative capabilities, coherence and scientific redaction).	0/10
06. Original contributions and contextualized analyses.	0/5
07. Conclusions that answer to the topic, to the problem and to the raised aim.	0/5
08. Citations and references of agreement to the regulation and to the format requested by the magazine (Any document and author who consists in the section of bibliography must consist in the body of story and vice versa).	0/5
Maximun total	50 points



RESEARCHES	
Valuable items	Score
01. Relevancy of the title (clarity, precision and with a maximum of 85 characters).	0/5
02. They summarize (In an alone paragraph and without epigraphs, minimum / minimal: 210-220 words).	0/5
03. Introduction (brief presentation of the topic; formulation of the problem; it designs to defending or hypothesis to demonstrating; I target; importance of the topic; current importance; methodology; structure of the document).	0/5

04. Review of the bibliographical foundation (Beside using current bibliography to consider the incorporation of Sophia's documents). Methodological rigorous and presentation of instruments of investigation.	0/10
05. Structure and organization of the article (argumentative capabilities, coherence and scientific redaction). Analysis and results of investigation with logical sequence in the text. Presentation of tables and figures without duplicity of information.	0/10
06. Original contributions and contextualized analyses of the information.	0/5
07. Discussion, conclusions and advances that answer to the topic, to the problem and to the raised aim.	0/5
08. Citations and references of agreement to the regulation and to the format requested by the magazine (Any document and author who consists in the section of bibliography must consist in the body of story and vice versa).	0/5
Total	50 points



4. Ethical issues

- a. **Plagiarism:** Although the journal uses plagiarism detection systems, if the reviewer suspects that an original is a substantial copy of another work, he must immediately inform the Editors citing the previous work in as much detail as possible.
- b. **Fraud:** If there is real or remote suspicion that the results in an article are false or fraudulent, it is necessary to inform them to the Editors.

5. Evaluation of the originals

After the quantitative-qualitative evaluation of the manuscript under review, the reviewer may make recommendations to improve the quality of the manuscript. However, the manuscript will be graded in three ways:

- a. **Rejection** due to detected deficiencies justified and reasoned with quantitative and qualitative assessment. The report should be longer if a score of less than 40 of the 50 possible points is obtained.
- b. **Acceptance without review**
- c. **Conditional acceptance** and therefore review (greater or lesser). In the latter case, it is necessary to clearly identify which review is necessary, listing the comments and even specifying paragraphs and pages suggesting modifications.

Indicaciones para revisores externos de «Sophia»

El **Consejo de Revisores Externos de «Sophia»** es un órgano colegiado independiente cuyo fin es garantizar la excelencia de esta publicación científica, debido a que la evaluación ciega —basada exclusivamente en la calidad de los contenidos de los manuscritos y realizada por expertos de reconocido prestigio internacional en la materia— es la mejor garantía y, sin duda, el mejor aval para el avance de la ciencia y para preservar en esta cabecera una producción científica original y valiosa.

Para ello, el **Consejo de Revisores Externos** está conformado por diversos académicos y científicos internacionales especialistas en **Filosofía de la Educación**, esenciales para seleccionar los artículos de mayor impacto e interés para la comunidad científica internacional. Esto permite a su vez que todos los artículos seleccionados para publicar en «Sophia» cuenten con un aval académico e informes objetivables sobre los originales.

Por supuesto, todas las revisiones en «Sophia» emplean el sistema estandarizado internacionalmente de evaluación por pares con «doble ciego» (*double-blind*) que garantiza el anonimato de los manuscritos y de los revisores de los mismos. Como medida de transparencia, anualmente se hacen públicos en la web oficial de la revista ([www. http://Sophia.ups.edu.ec/](http://Sophia.ups.edu.ec/)) los listados completos de los revisores.

299



1. Criterios de aceptación/rechazo de evaluación manuscritos

El equipo editorial de «Sophia» selecciona del listado de evaluadores del Consejo de Revisores a aquellos que se estiman más cualificado en la temática del manuscrito. Si bien por parte de la publicación se pide la máxima colaboración de los revisores para agilizar las evaluaciones y los informes sobre cada original, la aceptación de la revisión ha de estar vinculada a:

- a. **Experticia.** La aceptación conlleva necesariamente la posesión de competencias en la temática concreta del artículo a evaluar.
- b. **Disponibilidad.** Revisar un original exige tiempo y conlleva reflexión concienzuda de muchos aspectos.
- c. **Conflicto de intereses.** En caso de identificación de la autoría del manuscrito (a pesar de su anonimato), excesiva cercanía académica o familiar a sus autores, pertenencia a la misma Universidad, Departamento, Grupo de Investigación, Red Temática, Proyectos de Investigación, publicaciones conjuntas con los autores... o cualquier otro tipo de conexión o conflicto/cercanía profesional; el revisor debe rechazar la invitación del editor para su revisión.
- d. **Compromiso de confidencialidad.** La recepción de un manuscrito para su evaluación exige del Revisor un compromiso expreso de

confidencialidad, de manera que éste no puede, durante todo el proceso, ser divulgado a un tercero.

En caso que el revisor no pueda llevar a cabo la actividad por algunos de estos motivos u otros justificables, debe notificarlo al editor por la misma vía que ha recibido la invitación, especificando los motivos de rechazo.

2. Criterios generales de evaluación de manuscritos

a) Tema

La temática que se plantea en el original, además de ser valiosa y relevante para la comunidad científica, ha de ser limitada y especializada en tiempo y espacio, sin llegar al excesivo localismo.

b) Redacción

La valoración crítica en el informe de revisión ha de estar redactada de forma objetiva, aportando contenido, citas o referencias de interés para argumentar su juicio.

c) Originalidad

Como criterio de calidad fundamental, un artículo debe ser original, inédito e idóneo. En este sentido, los revisores deben responder a estas tres preguntas en la evaluación:

- ¿Es el artículo suficientemente novedoso e interesante para justificar su publicación?
- ¿Aporta algo al canon del conocimiento?
- ¿Es relevante la pregunta de investigación?

Una búsqueda rápida de literatura utilizando repositorios tales como Web of Knowledge, Scopus y Google Scholar para ver si la investigación ha sido cubierta previamente puede ser de utilidad.

d) Estructura

Los manuscritos que se remiten a «Sophia» deben seguir la estructura señalada en las normas de publicación tanto para las investigaciones empíricas como para revisiones de la literatura o estudios específicos. En este sentido, los originales han de contener resumen, introducción, metodología, resultados, discusión y conclusión.

- El título, el resumen y las palabras clave han de describir exactamente el contenido del artículo.

- La revisión de la literatura debe resumir el estado de la cuestión de las investigaciones más recientes y adecuadas para el trabajo presentado. Se valorará especialmente con criterios de idoneidad y que las referencias sean a trabajos de alto impacto —especialmente en WoS, Scopus, Scielo, etc. Debe incluir además la explicación general del estudio, su objetivo central y el diseño metodológico seguido.
- En caso de investigaciones, en los materiales y métodos, el autor debe precisar cómo se recopilan los datos, el proceso y los instrumentos usados para responder a las hipótesis, el sistema de validación, y toda la información necesaria para replicar el estudio.
- En los resultados se deben especificar claramente los hallazgos en secuencia lógica. Es importante revisar si las tablas o cuadros presentados son necesarios o, caso contrario, redundantes con el contenido del texto.
- En la discusión se deben interpretar los datos obtenidos a la luz de la revisión de la literatura. Los autores deberán incluir aquí si su artículo apoya o contradice las teorías previas. Las conclusiones resumirán los avances que la investigación plantea en el área del conocimiento científico, las futuras líneas de investigación y las principales dificultades o limitaciones para la realización de la investigación.
- Idioma: Se valorará positivamente si el idioma utilizado facilita la lectura y va en favor de la claridad, sencillez, precisión y transparencia del lenguaje científico. El Revisor no debe proceder a corrección, ya sea en español o inglés, sino que informará a los Editores de estos errores gramaticales u ortotipográficos.
- Finalmente, se requiere una profunda revisión de las referencias por si se hubiera omitido alguna obra relevante. Las referencias han de ser precisas, citando en la lógica de la temática a estudiar, sus principales obras así como los documentos que más se asemejen al propio trabajo, así como las últimas investigaciones en el área.



3. Dimensiones relevantes de valoración

Para el caso de artículos de investigaciones empíricas, «Sophia» utiliza una matriz de evaluación de cada original que responde a los criterios editoriales y al cumplimiento de la normativa de la publicación. En este sentido los revisores deberán atender a la valoración cuali-cuantitativa de cada uno de los aspectos propuestos en esta matriz con criterios de objetividad, razonamiento, lógica y experticia.

Para el caso de artículos reflexivos, estudios, revisiones de literatura (estado de la cuestión) u otro tipo de estudio (informes, propuestas, experiencias, entre otras), el Consejo Editorial remitirá a los revisores una matriz distinta, comprendiendo las características propias de estructura de este tipo de originales:

ESTUDIOS, PROPUESTAS, INFORMES Y EXPERIENCIAS	
Ítems valorables	Puntaje
01. Pertinencia del título (claridad, precisión y con un máximo de 85 caracteres).	0/5
02. Resumen (En un solo párrafo y sin epígrafes, mínimo/máximo: 210-220 palabras).	0/5
03. Introducción (breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento).	0/5
04. Revisión de la fundamentación bibliográfica (Además de usar bibliografía actual considerar la inclusión de documentos de Sophia).	0/10
05. Estructura y organización del artículo (capacidad argumentativa, coherencia y redacción científica).	0/10
06. Aportaciones originales y análisis contextualizados.	0/5
07. Conclusiones que respondan al tema, al problema y al objetivo planteado.	0/5
0.8. Citaciones y referencias de acuerdo a la normativa y al formato solicitado por la revista (Todo documento y autor que conste en la sección de bibliografía debe constar en el cuerpo del artículo y viceversa).	0/5
Total máximo	50 puntos

INVESTIGACIONES	
Ítems valorables	Puntaje
01. Pertinencia del título (claridad, precisión y con un máximo de 85 caracteres)	0/5
02. Resumen (En un solo párrafo y sin epígrafes, mínimo/máximo: 210-220 palabras).	0/5
03. Introducción (breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento).	0/5
04. Revisión de la fundamentación bibliográfica (Además de usar bibliografía actual considerar la inclusión de documentos de Sophia). Rigor metodológico y presentación de instrumentos de investigación.	0/10



05. Estructura y organización del artículo (capacidad argumentativa, coherencia y redacción científica). Análisis y resultados de investigación con secuencia lógica en el texto. Presentación de tablas y figuras sin duplicidad de datos.	0/10
0.6. Aportaciones originales y análisis contextualizados de los datos.	0/5
0.7. Discusión, conclusiones y avances que respondan al tema, al problema y al objetivo planteado.	0/5
0.8. Citaciones y referencias de acuerdo a la normativa y al formato solicitado por la revista (Todo documento y autor que conste en la sección de bibliografía debe constar en el cuerpo del artículo y viceversa).	0/5
Total máximo	50 puntos

4. Cuestiones éticas

303



- a. Plagio: Aunque la revista utiliza sistemas de detección de plagio, si el revisor sospecha que un original es una copia sustancial de otra obra, ha de informar de inmediato a los Editores citando la obra anterior con tanto detalle cómo le sea posible.
- b. Fraude: Si hay sospecha real o remota de que los resultados en un artículo son falsos o fraudulentos, es necesario informar de ellos a los Editores.

5. Evaluación de los originales

Una vez realizada la evaluación cuanti-cualitativa del manuscrito en revisión, el revisor podrá realizar recomendaciones para mejorar la calidad del original. Sin embargo, se atenderá a la calificación del manuscrito de tres maneras:

- a. **Rechazo** debido a las deficiencias detectadas, justificadas y razonadas con valoración cualitativa y cuantitativa. El informe ha de ser más extenso si obtiene menos de los 30 de los 50 puntos posibles.
- b. **Aceptación sin revisión.**
- c. **Aceptación condicionada** y por ende con revisión (mayor o menor). En este último caso, se ha de identificar claramente qué revisión es necesaria, enumerando los comentarios e incluso especificando párrafos y páginas en las que sugieren modificaciones.

Protocol of Manuscript Evaluation for External Reviewers

Instructions

- The fulfillment of each one of the articles will be valued in agreement to the following protocol.
- The total sum of the articles will determine the approval or rejection of the article.
- The minimal puntaje in order that the article is approved will be of 44/50.

304



Article Details	
Date of submission for evaluation:	Date of return of evaluation: Article code:
Title of the article to be evaluated:	
SECTION: REPORTS, STUDIES, PROPOSALS AND REVIEWS	
01.- Relevancy of the title (clarity, precision and with a maximum of 85 characters)	Mandatory comments: Value from 0 to 5
02.- They summarize (In an alone paragraph and without epigraphs, minimum / minimal: 210-220 words).	Mandatory comments: Value from 0 to 5
03.- Introduction (brief presentation of the topic; formulation of the problem; it designs to defending or hypothesis to demonstrating; I target; importance of the topic; current importance; methodology; structure of the document)	Mandatory comments: Value from 0 to 5
04.- Review of the bibliographical foundation (Beside using current bibliography to consider the incorporation of Sophia's documents).	Mandatory comments: Value from 0 to 10

05.- Structure and organization of the article (argumentative capabilities, coherence and scientific redaction)	Mandatory comments:	
	Value from 0 to 10	
06.- Original contributions and contextualized analyses	Mandatory comments:	
	Value from 0 to 5	
07.- Conclusions that answer to the topic, to the problem and to the raised aim	Mandatory comments:	
	Value from 0 to 5	
08.- Citations and references of agreement to the regulation and to the format requested by the magazine (Any document and author who consists in the section of bibliography must consist in the body of story and vice versa)	Mandatory comments:	
	Value from 0 to 5	
OBTAINED PUNCTUATION	Of the total of 50 predictable points, this assessor grants:	



REDACTED OPINION More detailed if the work does not get 44 points, to inform the autor (s). This text is sent verbatim to the autor (s) anonymously			
RECOMMENDATION ON HIS PUBLICATION IN SOPHIA			
Validation criteria	Result		
	Yes	Yes, with conditions	No
01. Widely recommended			
02. Recommended only if his quality is improved attending to the totality of the suggestions realized by the revisers			
03. His publication is not recommended			
PROPOSED CHANGES (In case of "Yes, with conditions")			

Protocolo de evaluación de manuscritos para revisores externos

Instrucciones

- El cumplimiento de cada uno de los ítems será valorado de acuerdo al siguiente protocolo.
- La suma total de los ítems determinará la aprobación o rechazo del artículo. El puntaje mínimo para que el artículo sea aprobado será de 44/50.

Datos del artículo		
Fecha envío evaluación:	Fecha devolución evaluación:	Código artículo:
Título del artículo a evaluar:		
SECCIÓN: ESTUDIOS, PROPUESTAS, INFORMES Y REVISIONES		
01.- Pertinencia del título (claridad, precisión y con un máximo de 85 caracteres)	Comentarios obligatorios:	
	Valore de 0 a 5	
02.- Resumen (En un solo párrafo y sin epígrafes, mínimo/máximo: 210-220 palabras).	Comentarios obligatorios:	
	Valore de 0 a 5	
03.- Introducción (breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento)	Comentarios obligatorios:	
	Valore de 0 a 5	
04.- Revisión de la fundamentación bibliográfica (Además de usar bibliografía actual considerar la inclusión de documentos de Sophia)	Comentarios obligatorios:	
	Valore de 0 a 10	
05.- Estructura y organización del artículo (capacidad argumentativa, coherencia y redacción científica)	Comentarios obligatorios	
	Valore de 0 a 10	

306



06.- Aportaciones originales y análisis contextualizados	Comentarios obligatorios:	
	Valore de 0 a 5	
07.- Conclusiones que respondan al tema, al problema y al objetivo planteado	Comentarios obligatorios:	
	Valore de 0 a 5	
08.- Citaciones y referencias de acuerdo a la normativa y al formato solicitado por la revista (Todo documento y autor que conste en la sección de bibliografía debe constar en el cuerpo del artículo y viceversa)	Comentarios obligatorios:	
	Valore de 0 a 5	
PUNTUACIÓN OBTENIDA	Del total de 50 puntos previsibles, este evaluador otorga:	



OPINIÓN REDACTADA (Más detallada si el trabajo no tiene 44 puntos, para informar al autor/es) Este texto se remite textualmente al/ los autor/es de forma anónima			
RECOMENDACIÓN SOBRE SU PUBLICACIÓN EN SOPHIA			
PUBLICABLE	Resultado		
	SI	Sí, con condiciones	NO
01. Ampliamente recomendado			
02. Recomendado sólo si se mejora su calidad atendiendo a la totalidad de las sugerencias realizadas por los revisores			
03. No se recomienda su publicación			
MODIFICACIONES PROPUESTAS (En caso de «Sí, con condiciones»)			

Checklist prior to sending the manuscript

1. CHECK OF THE MANUSCRIPT, PRIOR TO SENDING	
To facilitate the process of evaluation of the manuscript and to accelerate the report of its possible publication, a final self-review of the manuscript is advised, checking the following questions.	
COVER LETTER	
Title of the manuscript in spanish (maximum 85 characters).	
Title of the manuscript in english (maximum 85 characters).	
The two versions of the title of the manuscript are concise, informative and collect as many identifiable terms as possible.	
The abstract in spanish is included, in a single paragraph and without epigraphs (minimum / maximum: 210/220 words).	
The abstract in english is included, in a single paragraph and without epigraphs (minimum / maximum: 210-220 words).	
Abstracts in spanish and english respond in order to the following issues: justification of the subject, objectives, study methodology, results and conclusions.	
It includes 6 descriptors (in english and spanish) (only simple words, not phrases or combinations of words), with the most significant terms, and if possible standardized.	
The texts in english (title, abstract and descriptors) have been written or verified by an official translator or expert in this language (The use of automatic translators is prohibited).	
All the identification data of the authors are included in the order stipulated in the norms: identification and correspondence data, professional affiliations, last academic degree...	
The first and last name of the authors has been normalized.	
Each author is identified with their ORCID code.	
The maximum number of authors is three, with the exception of those works that justify a higher but limited number of authors	
The author(s) have duly signed the letter of presentation of the article, which includes the partial transfer of rights and the declaration of conflict of interest.	
MANUSCRIPT	
It includes title of the manuscript, abstract, and keywords. All in spanish and english.	



An introduction is included that in order contains: brief presentation of the subject; problem formulation; Idea to defend or hypothesis to prove; objective; Importance of the theme; relevance; methodology; structure of the document.	
The text is within the minimum and maximum extension: In the Review sections: 10,000/11,000 words of text (including references). In the research section: 8,000/9,500 words of text (including references). Reports, Studies: 8,000/9,500 words of text (including references).	
In case of research, the manuscript responds to the structure required in the guidelines (IMRDC).	
In the case of a report, study or review, the manuscript respects the minimum structure required by the guidelines.	
The review work includes three citations from three previous issues of Sophia Journal.	
The manuscript explicitly cites and cites the used sources and materials.	
The methodology described for the research work is clear and concise, allowing its replication, if necessary, by other experts.	
The conclusions follow on objective and problem raised are supported by the results obtained and presented in the form of a synthesis.	
If statistical analyzes have been used, they have been reviewed/contrasted by an expert.	
The citations in the text are strictly in accordance with the APA 6 regulations, reflected in the instructions.	
In case of use of final notes, it has been verified that these are descriptive and cannot be integrated into the general citation system. Footnotes are not acceptable.	
The final references have been rigorously reviewed and only those that have been cited in the text are included.	
The final references conform in style and format to the international standards used in Sophia.	
The number of references is according to the theoretical basis of the study carried out	
DOIs have been included in all References that carry it in the following format: doi: https://doi.org/XXXXXX	
All web addresses of references have been shortened with Google Url Shortner	
If figures and charts are included, they should provide additional and not repeated information in the text. Their graphic quality has been verified.	
The number of charts and / or figures does not exceed 6	
If the case, financial support is declared.	



ASPECTOS FORMALES	
The rules have been strictly observed in the use of bold, capital letters, italics and underlines.	
Arial font, size 12 has been used.	
A single line spacing (1) has been used without tab.	
The epigraphs have been properly and hierarchically numbered in Arabic.	
Double spaces have been deleted.	
The typographic quotes « » (with alt + 174 and alt + 175 for opening and closing) have been used.	
Word dictionary for surface spelling has been used.	
The text has been supervised by external staff to ensure grammar and style.	
PRESENTATION	
Attached is a cover letter indicating originality, novelty of the work and section of the journal to which it is addressed, and if appropriate, informed consent of experimentation.	
The cover letter includes an attachment signed by all authors, being responsible for the authorship and giving the copyright to the publisher.	
The manuscript is uploaded to the platform in Word format and without authors identification	
ANNEXED DOCUMENTS	
Attached are the two attached documents: the cover letter and the manuscript.	
The accompanying documents and annexes have been published with Figshare.	



Chequeo previo al envío del manuscrito

1. CHEQUEO DEL MANUSCRITO, PREVIO AL ENVÍO	
Para facilitar el proceso de evaluación del manuscrito y acelerar el informe de su posible publicación, se aconseja una autorevisión final del manuscrito, comprobando las siguientes cuestiones.	
DOCUMENTO PORTADA (Cover Letter)	
Se incluye título del manuscrito en español (máximo 85 caracteres).	
Se incluye título del manuscrito en inglés (máximo 85 caracteres).	
Las dos versiones del título del manuscrito son concisas, informativas y recogen el mayor número de términos identificativos posibles.	
Se incluye resumen en español, en un solo párrafo y sin epígrafes (mínimo/máximo: 210/220 palabras).	
Se incluye abstract en inglés, en un solo párrafo y sin epígrafes (mínimo/máximo 210-220 palabras).	
Los resúmenes en español e inglés responden ordenadamente a las siguientes cuestiones: justificación del tema, objetivos, metodología del estudio, resultados y conclusiones.	
Se incluyen 6 descriptores (en español e inglés) (sólo palabras simples, no sintagmas o combinaciones de palabras), con los términos más significativos, y a ser posibles estandarizados.	
Los textos en inglés (título, resumen y descriptores) han sido redactados o verificados por un traductor oficial o persona experta en este idioma (Se prohíbe el uso de traductores automáticos).	
Se incluyen todos los datos de identificación de los autores en el orden estipulado en la normativa: datos de identificación y correspondencia, filiaciones profesionales, último grado académico.	
Se ha normalizado el nombre y apellido de los autores.	
Cada autor está identificado con su código ORCID.	
El número máximo de autores es tres, a excepción de aquellos trabajos que justifiquen un número mayor limitado.	
El autor/es ha firmado debidamente la carta de presentación del artículo, en la que consta la cesión parcial de derechos y la declaración de conflicto de intereses.	
MANUSCRITO	





Se incluye título del manuscrito en español, inglés, resumen, abstract, descriptores y keywords	
Se incluye una introducción que en orden contiene: breve presentación del tema; formulación del problema; idea a defender o hipótesis a demostrar; objetivo; importancia del tema; actualidad; metodología; estructura del documento.	
El trabajo respeta la extensión mínima y máxima permitidas: Sección de Revisiones: 10.000/11.000 palabras de texto (incluidas las referencias). Investigaciones: 8.000/9.500 palabras de texto (incluidas referencias). Informes, Estudios: 8.000/9.500 palabras de texto (incluidas referencias).	
En caso de investigación, el manuscrito responde a la estructura exigida en las normas (IMRDC).	
Si se trata de un informe, estudio o revisión, el manuscrito respeta la estructura mínima exigida en las normas.	
En los trabajos de revisión se incluyen tres citas de tres números anteriores de la Revista Sophia.	
El manuscrito explicita y cita correctamente las fuentes y materiales empleados.	
La metodología descrita, para los trabajos de investigación, es clara y concisa, permitiendo su replicación, en caso necesario, por otros expertos.	
Las conclusiones responden al objetivo y al problema planteados, se apoyan en los resultados obtenidos y se presentan en forma de síntesis.	
Si se han utilizado análisis estadísticos, éstos han sido revisados/contrastados por algún experto.	
Las citas en el texto se ajustan estrictamente a la normativa APA 6, reflejadas en las instrucciones.	
En caso de uso de notas finales, se ha comprobado que éstas son descriptivas y no pueden integrarse en el sistema de citación general. No se aceptan notas a pie de página.	
Se han revisado rigurosamente las referencias finales y se incluyen solo aquéllas que han sido citadas en el texto.	
Las referencias finales se ajustan en estilo y formato a las normas internacionales utilizadas en Sophia.	
El número de referencias está de acuerdo a la fundamentación teórica del estudio realizado	
Se han incluido los DOI en todas las Referencias que lo lleven con el siguiente formato: doi: https://doi.org/XXXXXX	

Todas las direcciones web de las referencias han sido acortadas con Google Url Shortner	
Si se incluyen figuras y tablas éstas deben aportar información adicional y no repetida en el texto. Su calidad gráfica se ha verificado.	
El número de tablas y/o figuras no sobrepasa las 6.	
En su caso, se declaran los apoyos y/o soportes financieros.	
ASPECTOS FORMALES	
Se ha respetado rigurosamente la normativa en el uso de negritas, mayúsculas, cursivas y subrayados.	
Se ha utilizado letra Arial, tamaño 12.	
Se ha usado un interlineado sencillo (1) y sin tabulaciones.	
Se han numerado los epígrafes en arábigo de forma adecuada y jerárquicamente.	
Se han suprimido los dobles espacios.	
Se han empleado las comillas tipográficas « » (con alt+174 y alt+175 para apertura y cierre).	
Se ha utilizado el diccionario de Word para corrección ortográfica superficial.	
Se ha supervisado el trabajo por personal externo para garantizar la gramática y el estilo.	
PRESENTACIÓN	
Se adjunta carta de presentación indicando originalidad, novedad del trabajo y sección de la revista a la que se dirige, así como, en su caso, consentimiento informado de experimentación.	
La carta de presentación incluye un anexo firmado por todos los autor/es, responsabilizándose de la autoría y cediendo los derechos de autor al editor.	
El manuscrito se sube a la plataforma en formato Word y sin identificación de autores.	
DOCUMENTOS ANEXOS	
Se adjuntan los dos documentos anexos: la carta de presentación y el manuscrito.	
Los documentos complementarios y anexos han sido publicados con Figshare.	



Cover Letter

Section (Mark)

Monographic Dossier ____

Miscellaneous ____

Title in Spanish: Arial 14 bold and centered.

Maximum 85 characters with spaces

Title in English: Arial 14 cursive. Maximum 805 characters with spaces

Name author 1 (standardized)

Professional category, Institution, Country

Institutional email

ORCID

Name author 2 (standardized)

Professional category, Institution, Country

Institutional email

ORCID

Name author 3 (standardized)

Professional category, Institution, Country

Institutional email

ORCID

314



Abstract (Spanish)

Minimum 210 and maximum 220 words. It must include 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written "The present paper analyzes..."

Abstract (English)

Minimum 200 and maximum 210 words. It must include 1) Justification of the topic; 2) Objectives; 3) Methodology; 4) Main results; 5) Main conclusions. It must be impersonally written "The present paper analyzes..." Do not use automatic translation systems.

Keywords (Spanish)

6 standardized terms preferably of a single word and of the UNESCO Thesaurus separated by commas (,).

Keywords

The 6 terms referred to in English separated by commas (.). Do not use automatic translation systems.

Financial Support of Research (optional)

Entity:

Country:

City:

Subsidized project:

Code of the project:



Cover Letter

Sección (Marcar)

Dossier Monográfico ____

Miscelánea ____

Título en español: Arial 14 negrita y centrado.

Máximo 85 caracteres con espacios

Title in English: Arial 14 cursiva. Máximo 85 caracteres con espacios

Nombre autor 1 (estandarizado)

Categoría profesional, Institución, País

Correo electrónico institucional

ORCID

Nombre autor 2 (estandarizado)

Categoría profesional, Institución, País

Correo electrónico institucional

ORCID

Nombre autor 3 (estandarizado)

Categoría profesional, Institución, País

Correo electrónico institucional

ORCID

316



Resumen

Mínimo 210 y máximo 220 palabras. Debe incluir 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...”

Abstract

Mínimo 200 y máximo 210 palabras cursiva. Debe incluir 1) Justificación del tema; 2) Objetivos; 3) Metodología; 4) Principales resultados; 5) Principales conclusiones. Ha de estar escrito de manera impersonal “El presente trabajo analiza...” No utilizar sistemas de traducción automáticos.

Descriptores

6 términos estandarizados preferiblemente de una sola palabra y del Thesaurus de la UNESCO separados por coma (,).

Keywords

Los 6 términos referidos en inglés separados por coma (,). No utilizar sistemas de traducción automáticos.

Apoyos y soporte financiero de la investigación (opcional)

Entidad:

País:

Ciudad:

Proyecto subvencionado:

Código de proyecto:



PRESENTATION

Cover Letter

Mr. Editor of «Sophia»

Having read the regulations of the journal «Sophia» and analyzed its coverage, thematic area and approach, I consider that this journal is the ideal one for the dissemination of the work that I hereby attach, for which I beg you to be submitted for consideration for publication. The original has the following title “_____”, whose authorship corresponds to _____.

The authors (s) certify that this work has not been published, nor is it under consideration for publication in any other journal or editorial work.

The author (s) are responsible for their content and have contributed to the conception, design and completion of the work, analysis and interpretation of data, and to have participated in the writing of the text and its revisions, as well as in the approval of the version which is finally referred to as an attachment.

Changes to the content are accepted if they occur after the review process, and also changes in the style of the manuscript by the editorial process of «Sophia».

Transfer of Copyright and Declaration of Conflict of Interest

The Abya-Yala Publishing House (publishing house of the works of the *Universidad Politécnica Salesiana* of Ecuador) preserves the copyrights of the published works and will favor the reuse of the same. The works are published in the electronic edition of the journal under a Creative Commons Attribution / Noncommercial-No Derivative Works 3.0 Ecuador license: they can be copied, used, disseminated, transmitted and publicly displayed.

The undersigned author partially transfers the copyrights of this work to the *Abya-Yala Publishing House* (Ecuador) (RUC: 1790747123001), for the printed editions.

It is also declared that they have respected the ethical principles of research and are free from any conflict of interest.

In ____ (city), by the ____ days of the month of ____ of 201__

Signed. (By the author or in the case, all the authors)



Author first and last name
Identification document

Signature

Author first and last name
Identification document

Signature

Author first and last name
Identification document

Signature

319



Note: Once saved the completed and signed document, it must be registered through the OJS system in the section “Complementary Files”.

PRESENTACIÓN

Cover Letter

Sr. Editor de «Sophia»

Leída la normativa de la revista «Sophia» y analizada su cobertura, área temática y enfoque, considero que esta revista es la idónea para la difusión del trabajo que le adjunto, por lo que le ruego sea sometida a la consideración para su publicación. El original lleva por título “_____”, cuya autoría corresponde a _____.

El/los autor/es certifica(n) que este trabajo no ha sido publicado, ni está en vías de consideración para su publicación en ninguna otra revista u obra editorial.

El/los autor/es se responsabilizan de su contenido y de haber contribuido a la concepción, diseño y realización del trabajo, análisis e interpretación de datos, y de haber participado en la redacción del texto y sus revisiones, así como en la aprobación de la versión que finalmente se remite en adjunto.

Se aceptan la introducción de cambios en el contenido si hubiere lugar tras la revisión, y de cambios en el estilo del manuscrito por parte de la redacción de «Sophia».

Cesión de derechos y declaración de conflicto de intereses

La Editorial Abya-Yala (editorial matriz de las obras de la Universidad Politécnica Salesiana de Ecuador) conserva los derechos patrimoniales (**copyright**) de las obras publicadas y favorecerá la reutilización de las mismas. Las obras se publican en la edición electrónica de la revista bajo una licencia Creative Commons Reconocimiento / No Comercial-Sin Obra Derivada 3.0 Ecuador: se pueden copiar, usar, difundir, transmitir y exponer públicamente.

El/los autor/es abajo firmante/s transfiere(n) parcialmente los derechos de propiedad (**copyright**) del presente trabajo a la editorial Abya-Yala (Ecuador) (RUC: 1790747123001), para las ediciones impresas.

Se declara además haber respetado los principios éticos de investigación y estar libre de cualquier conflicto de intereses.

En ____ (ciudad), a los ____ días del mes de ____ de 201__

Firmado. (Por el autor o en su caso, todos los autores)

320



Nombre y apellido del autor

Documento de Identidad

Firma

Nombre y apellido del autor

Documento de Identidad

Firma

Nombre y apellido del autor

Documento de Identidad

Firma

321



Nota: Una vez haya guardado el documento cumplimentado y firmado, deberá consignarlo a través del sistema OJS en la sección “Ficheros Complementarios”.

Announcements 2020-2025 / Convocatorias 2020-2025

ANNOUNCEMENTS 2020 - 2025

Sophia 29

Complex thinking and the sciences of complexity in education

Descriptors: Paradigms of complexity and transdisciplinarity; Philosophy of knowledge and learning from complexity; Complex thinking and learning; Problem of method in complex thinking; Contributions of the complex thought for education; Education and complex thinking; Criticisms of the complexity paradigm; Complex thinking, critical thinking and education; Complex thinking and creativity in education; The being and the existence in the paradigm of the complexity.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: December 15, 2019

Publication date of this issue: July 15, 2020

Sophia 30

Philosophy of the cognitive sciences and education

Descriptors: Philosophy and cognitive science; Philosophical debate on the cognitive sciences; Philosophical foundation of cybernetics; Epistemological foundations of cognitive theory; Philosophical foundations of connectionist theory; Current trends in cognitive science; Theory of mind and cognitive sciences; Evolutionary psychology and education; Relations between cognitive sciences and education sciences; Contributions of the cognitive sciences for education.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: July 15, 2020

Publication date of this issue: January 15, 2021

324



Sophia 31

The problem of truth in the sciences and in the pedagogical practice

Descriptors: Conceptions of truth in the history of philosophy and its implications in educational processes; Philosophical, psychological and pedagogical foundations of truth; Truth, fact and science; Truth in the social sciences; Truth in the natural sciences; Truth in the exact sciences; Truth in the human sciences; Truth in the sciences of information and communication; New trends, approaches and perspectives on truth; The truth in education.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: December 15, 2020

Publication date of this issue: July 15, 2021

Sophia 32

Philosophical reflection on the quality on education

325



Descriptors: Analysis of the concept of “quality” in education; Philosophical, psychological and pedagogical fundamentals of quality in education; Quality and comprehensive and inclusive educational models; Philosophical basis of complex competences in education; Quality and skills in education; Approach of the capacities and educational quality.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: July 15, 2021

Publication date of this issue: January 15, 2022

Sophia 33

Philosophy of the mind and education

Descriptors: Effects and causes of mental states; The nature of mental states and their importance in education; Monistic responses to the mind-body problem; Theories about the philosophy of mind; The philosophy of mind at the present; Philosophy of mind and its relationship with other sciences; Foundation of mental activity and behavior; Relationship of the philosophy of mind with psychology; Philosophy of mind and education; The power of the mind in education; Pedagogical strategies for the development of the mind; Concept of disability or mental dysfunction: implications and proposals in education.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: December 15, 2021

Publication date of this issue: July 15, 2022

Sophia 34

Philosophy, anthropology and education

Descriptors: Philosophical foundations of ethnography; Philosophical basis of cultural theories; Contributions of cultural and social anthropology to education; Philosophical foundation of dialogue between cultures; Interculturality, multiculturalism and education; The task of philosophy in intercultural dialogue; The thought of diversity and its educational importance; Global citizenship, cosmopolitanism and education; Ecosophy, culture and transdisciplinarity.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: July 15, 2022

Publication date of this issue: January 15, 2023

326



Sophia 35

Philosophical currents and their impact on pedagogical orientations

Descriptors: Philosophy as the fundamental basis of pedagogical orientations. Idealism as the basis for the generation of pedagogical orientations; Rationalism as the foundation of pedagogical orientations; Empiricism as the basis of educational realism; Illustration as support of educational enlightenment; Other philosophical currents as the basis of theories or pedagogical orientations throughout history; Philosophical foundations of the new pedagogies; Philosophy of technology in the educational field; Philosophical basis of constructivism and other pedagogical theories; Ethical thinking and pedagogy; Philosophical critique of current educational models; Philosophy of dialogue and education; Hermeneutics and their contributions to the current pedagogy.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: December 15, 2022

Publication date of this issue: July 15, 2023

Sophia 36

Philosophical approach to learning as a cognitive process

Descriptors: Philosophical basis of learning; Learning as a cognitive process; Learning as a product and as a process of knowledge; Philosophical foundation of learning theories; Psychological and pedagogical foundations of learning; Philosophical foundations of multiple intelligences and education; Emotional intelligence and its impact on educational processes; Science and philosophy of human emotions: educational repercussions; Sense and meaning

of cognitive processes; Memory, thought and language as the main cognitive processes of the human being; Cognitive processes and meaningful learning.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: July 15, 2023

Publication date of this issue: January 15, 2024

Sophia 37

Physics, metaphysics and education

Descriptors: Philosophical reflections on the interpretation of physics; Metaphysics in the twenty-first century; History of physics and its educational approach; Relations between conceptions of physics in the history of philosophy; Problem of sense and truth in the philosophy of physics; Nature and implications of thermodynamics; Epistemology and guiding principles of current physical theories; Philosophical foundations of quantum mechanics; Philosophical implications of quantum theory; Philosophical implications of Newtonian physics; Philosophical implications of the theory of relativity; Pedagogical strategies in the teaching-learning of physics; Educational proposals to boost the understanding of physics; Philosophical implications of current theoretical physics.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: December 15, 2023

Publication date of this issue: July 15, 2024

Sophia 38

The inductive method in the humanities and pedagogy

Descriptors: Scientific activity and reflection on the method of knowledge; The inductive method in the social sciences; Induction, experience and action as the foundation of pedagogy; The methods of knowledge and learning in the humanities; Value and limits of the experimental method in the human sciences; Value and limits of pedagogical positivism; Reflections on the scientific method and implications in the learning processes; Applications of the inductive method in education; Usefulness of the inductive method for psychology; Pedagogical proposals of an inductive character in the human sciences.

Generation of articles from representatives of philosophy prominent in the central theme and its implications in psychology, pedagogy or other disciplines.

Deadline for receipt of manuscripts: July 15, 2024

Publication date of this issue: January 15, 2025

327



CONVOCATORIAS 2020 - 2025

Sophia 29

El pensamiento complejo y las ciencias de la complejidad en la educación

Descriptores: Paradigmas de la complejidad y la transdisciplinariedad; filosofía del conocimiento y el aprendizaje desde la complejidad; pensamiento complejo y aprendizaje; problema del método en el pensamiento complejo; aportes del pensamiento complejo para la educación; educación y pensamiento complejo; críticas al paradigma de la complejidad; pensamientos complejo, pensamiento crítico y educación; pensamiento complejo y creatividad en la educación; el ser y la existencia en el paradigma de la complejidad.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2019

Fecha de publicación de esta edición: 15 de julio de 2020

Sophia 30

Filosofía de las ciencias cognitivas y educación

Descriptores: Filosofía y ciencia cognitiva; debate filosófico sobre las ciencias cognitivas; fundamentación filosófica de la cibernética; fundamentos epistemológicos de la teoría cognitivista; fundamentos filosóficos de la teoría conexionista; tendencias actuales de la ciencia cognitiva; teoría de la mente y ciencias cognitivas; psicología evolutiva y educación; relaciones entre ciencias cognitivas y ciencias de la educación; aportes de las ciencias cognitivas para la educación.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2020

Fecha de publicación de esta edición: 15 de enero de 2021

328



Sophia 31

El problema de la verdad en las ciencias y en la práctica pedagógica

Descriptores: Concepciones de verdad en la historia de la filosofía y sus implicaciones en los procesos educativos; fundamentos filosóficos, psicológicos y pedagógicos de la verdad; verdad, hecho y ciencia; la verdad en las ciencias sociales; la verdad en las ciencias naturales; la verdad en las ciencias exactas; la verdad en las ciencias humanas; la verdad en las ciencias de la información y de la comunicación; nuevas tendencias, enfoques y perspectivas sobre la verdad; la verdad en la educación.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2020

Fecha de publicación de esta edición: 15 de julio de 2021

329



Sophia 32

Reflexión filosófica sobre la calidad en la educación

Descriptores: Análisis del concepto de “calidad” en la educación; fundamentos filosóficos, psicológicos y pedagógicos de la calidad en educación; calidad y modelos educativos integrales e inclusivos; bases filosóficas de las competencias complejas en la educación; la calidad y las competencias en la educación; enfoque de las capacidades y calidad educativa.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2021

Fecha de publicación de esta edición: 15 de enero de 2022

Sophia 33

Filosofía de la mente y educación

Descriptores: Efectos y causas de los estados mentales; la naturaleza de los estados mentales y su importancia en educación; respuestas monistas al problema mente-cuerpo; teorías sobre la filosofía de la mente; la filosofía de la mente en la actualidad; filosofía de la mente y la relación con otras ciencias; fundamento de la actividad mental y de la conducta; relación filosofía de la mente con la psicología; filosofía de la mente y educación; el poder de la mente en la educación; estrategias pedagógicas para el desarrollo de la mente; concepto de discapacidad o disfunción mental: implicaciones y propuestas en educación.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2021

Fecha de publicación de esta edición: 15 de julio de 2022

Sophia 34

Filosofía, antropología y educación

Descriptores: Fundamentos filosóficos de la etnografía; bases filosóficas de las teorías culturales; aportaciones de la antropología cultural y social a la educación; fundamentación filosófica del diálogo entre culturas; interculturalidad, multiculturalidad y educación; el quehacer de la filosofía en el diálogo intercultural; el pensamiento de la diversidad y su importancia educativa; ciudadanía global, cosmopolitismo y educación; ecosofía, cultura y transdisciplinariedad.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2022

Fecha de publicación de esta edición: 15 de enero de 2023

330



Sophia 35

Corrientes filosóficas y su incidencia en las orientaciones pedagógicas

Descriptores: La filosofía como base fundamental de las orientaciones pedagógicas. El idealismo como base para la generación de orientaciones pedagógicas; el racionalismo como fundamento de orientaciones pedagógicas; el empirismo como sustento del realismo educativo; la ilustración como apoyo del iluminismo educativo; otras corrientes filosóficas como base de teorías u orientaciones pedagógicas a través de la historia; fundamentos filosóficos de las nuevas pedagogías; filosofía de la tecnología en el ámbito educativo; bases filosóficas del constructivismo y de otras teorías pedagógicas; pensamiento ético y pedagogía; crítica filosófica a los modelos educativos actuales; filosofía del diálogo y educación; la hermenéutica y sus aportaciones a la pedagogía actual.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2022

Fecha de publicación de esta edición: 15 de julio de 2023

Sophia 36

Enfoque filosófico del aprendizaje como proceso cognitivo

Descriptores: Bases filosóficas del aprendizaje; el aprendizaje como proceso cognitivo; el aprendizaje como producto y como proceso del conocimiento; fundamento filosófico de las teorías del aprendizaje; fundamentos psicológicos y pedagógicos del aprendizaje; fundamentos filosóficos de las inteligencias múltiples y educación; la inteligencia emocional y su incidencia en los procesos educativos; ciencia y filosofía de las emociones humanas: repercusiones educativas; sentido y significado de los procesos cognitivos; memoria, pensamiento y lenguaje como principales procesos cognitivos del ser humano; procesos cognitivos y aprendizajes significativos.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2023

Fecha de publicación de esta edición: 15 de enero de 2024

331



Sophia 37

Física, metafísica y educación

Descriptores: Reflexiones filosóficas acerca de la interpretación de la física; la metafísica en el siglo XXI; historia de la física y su planteamiento educativo; relaciones entre concepciones de la física en la historia de la filosofía; problema del sentido y de la verdad en la filosofía de la física; naturaleza e implicaciones de la termodinámica; epistemología y principios rectores de las teorías físicas actuales; fundamentos filosóficos de la mecánica cuántica; implicaciones filosóficas de la teoría cuántica; implicaciones filosóficas de la física newtoniana; implicaciones filosóficas de la teoría de la relatividad; estrategias pedagógicas en la enseñanza-aprendizaje de la física; propuestas educativas para dinamizar la comprensión de la física; implicaciones filosóficas de la física teórica actual.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de diciembre de 2023

Fecha de publicación de esta edición: 15 de julio de 2024

Sophia 38

El método inductivo en las humanidades y en la pedagogía

Descriptores: La actividad científica y reflexión sobre el método de conocimiento; el método inductivo en las ciencias sociales; inducción, experiencia y acción como fundamento de la pedagogía; los métodos de conocimiento y aprendizaje en las humanidades; valor y límites del método experimental en las ciencias humanas; valor y límites del positivismo pedagógico; reflexiones sobre el método científico e implicaciones en los procesos de aprendizaje; aplicaciones del método inductivo en la educación; utilidad del método inductivo para la psicología; propuestas pedagógicas de carácter inductivo en las ciencias humanas.

Generación de artículos desde representantes de la filosofía destacados en el tema central y sus implicaciones en la psicología, en la pedagogía o en otras disciplinas.

Fecha límite para la recepción de manuscritos: 15 de julio de 2024

Fecha de publicación de esta edición: 15 de enero de 2025

332

