

# INTED **2020**

14th International  
Technology, Education and  
Development Conference

2-4 March, 2020 - Valencia (Spain)

## CONFERENCE PROCEEDINGS



*Sharing the Passion for Learning*

# **INTED** **2020**

**14th International  
Technology, Education and  
Development Conference**

2-4 March, 2020 - Valencia (Spain)

**CONFERENCE  
PROCEEDINGS**

**Published by**  
IATED Academy  
iated.org

**INTED2020 Proceedings**  
14th International Technology, Education and Development Conference  
March 2nd-4th, 2020 — Valencia, Spain

**Edited by**  
L. Gómez Chova, A. López Martínez, I. Candel Torres  
IATED Academy

ISBN: 978-84-09-17939-8  
ISSN: 2340-1079  
V-153-2020

Book cover designed by  
J.L. Bernat

All rights reserved. Copyright © 2020, IATED

The papers published in these proceedings reflect the views only of the authors. The publisher cannot be held responsible for the validity or use of the information therein contained.

## INTED2020 COMMITTEE AND ADVISORY BOARD

<i>Agustín López</i>	SPAIN	<i>Luis Gómez Chova</i>	SPAIN
<i>Alan Carlson</i>	SWEDEN	<i>Luís Torres Moreira</i>	PORTUGAL
<i>Alessandro Brawerman</i>	BRAZIL	<i>Lukasz Wiechetek</i>	POLAND
<i>Alessia Bevilacqua</i>	ITALY	<i>M<sup>a</sup> Jesús Suesta</i>	SPAIN
<i>Allison Spring</i>	UNITED STATES	<i>Marcelo Gaspar</i>	PORTUGAL
<i>Amparo Girós</i>	SPAIN	<i>Marek Medrek</i>	POLAND
<i>Ana Paula Lopes</i>	PORTUGAL	<i>Maria Cutajar</i>	MALTA
<i>Ana Tomás</i>	SPAIN	<i>Maria Porcel</i>	SPAIN
<i>Antonio García</i>	SPAIN	<i>Martina Windisch-Koenig</i>	AUSTRIA
<i>Asako Ohno</i>	JAPAN	<i>Mary Dempsey</i>	IRELAND
<i>Beatriz Martínez</i>	SPAIN	<i>Matthias Baume</i>	GERMANY
<i>Charles Weiss</i>	UNITED STATES	<i>Michael Collins</i>	IRELAND
<i>Chelo González</i>	SPAIN	<i>Michela Tramonti</i>	ITALY
<i>Christine Wilson</i>	UNITED STATES	<i>Miguel Peiró</i>	SPAIN
<i>David Martí</i>	SPAIN	<i>Mohd Hassan Abdullah</i>	MALAYSIA
<i>Dina Nader</i>	UNITED ARAB EMIRATES	<i>Monika Banas</i>	POLAND
<i>Dragutin Kermek</i>	CROATIA	<i>Nakisa (Niki) Alborz</i>	UNITED STATES
<i>Eladio Duque</i>	SPAIN	<i>Norma Barrachina</i>	SPAIN
<i>Elena Grunt</i>	RUSSIAN FEDERATION	<i>Päivi Tossavainen</i>	FINLAND
<i>Eva Ponick</i>	GERMANY	<i>Pasi Puranen</i>	FINLAND
<i>Farhad Eftekhari</i>	FINLAND	<i>Peter Haber</i>	AUSTRIA
<i>Felia Wong</i>	SINGAPORE	<i>Petr Beremlijski</i>	CZECH REPUBLIC
<i>Filomena Soares</i>	PORTUGAL	<i>Pisut Koomsap</i>	THAILAND
<i>Guilherme Temporão</i>	BRAZIL	<i>Priscila Berger</i>	GERMANY
<i>Heike Wiesner</i>	GERMANY	<i>Remigijus Bubnys</i>	LITHUANIA
<i>Ignacio Ballester</i>	SPAIN	<i>Samuel Awuku</i>	UNITED KINGDOM
<i>Ignacio Candel</i>	SPAIN	<i>Sandra Stein</i>	KUWAIT
<i>Ilias Batzogiannis</i>	GREECE	<i>Sarah Hord</i>	UNITED STATES
<i>Iván Martínez</i>	SPAIN	<i>Sergio Pérez</i>	SPAIN
<i>Javier Domenech</i>	SPAIN	<i>Sheri Bias</i>	UNITED STATES
<i>Javier Martí</i>	SPAIN	<i>Stefania Cassar</i>	UNITED KINGDOM
<i>Joanna Lees</i>	FRANCE	<i>Stellan Sundh</i>	SWEDEN
<i>John Gordon</i>	UNITED KINGDOM	<i>Tânia Carraquico</i>	PORTUGAL
<i>Jose F. Cabeza</i>	SPAIN	<i>Tessai Hayama</i>	JAPAN
<i>Jose Luis Bernat</i>	SPAIN	<i>Tracy Hoot</i>	CANADA
<i>Juanan Herrero</i>	SPAIN	<i>Vasudeva Aravind</i>	UNITED STATES
<i>Judith Szerdahelyi</i>	UNITED STATES	<i>Victor Fester</i>	NEW ZEALAND
<i>Kadiri Abdul-Karim</i>	GHANA	<i>Wendy Gorton</i>	UNITED STATES
<i>Karl Jordell</i>	NORWAY	<i>Xavier Lefranc</i>	FRANCE
<i>Kimberly Hoggatt Krumwiede</i>	UNITED STATES	<i>Xema Pedrós</i>	SPAIN
<i>Lorena López</i>	SPAIN	<i>Yulia Piller</i>	UNITED STATES

## CONFERENCE SESSIONS

### ORAL SESSIONS, 2nd March 2020

Mentoring & Tutoring  
Virtual and Augmented Reality (1)  
Competence Based Evaluation  
Smartphones in Education  
Coding & Computational Thinking  
Entrepreneurship Education  
Student Engagement, Support and Motivation  
Immigrants Education & Inclusion  
Experiences in Primary and Early Childhood Education

Technology-Enhanced Learning and Teaching (1)  
Virtual and Augmented Reality (2)  
Blended Learning  
Audiovisual Media for Learning and Teaching  
Computer Science Education (1)  
New Challenges in Higher Education  
ICT in Special Education  
Cultural Heritage Education  
Digital Literacy & ICT Skills (1)

Distance Learning Experiences  
Open Online Courses & Educational Resources  
Collaborative Learning Experiences  
Social Media in Education  
Computer Science Education (2)  
University-Industry Cooperation  
Inclusive Education  
Intercultural Education  
Business & Accounting Education

Distance & Personalized Learning  
Virtual and Augmented Reality (3)  
Problem Based Learning  
Technology-Enhanced Learning and Teaching (2)  
Media Literacy in Education  
Quality Assurance in Higher Education  
Student Support  
Study Abroad & Exchange Experiences  
Vocational Education

### POSTER SESSIONS, 2nd March 2020

Experiences in Education

Global Issues in Education and Research

**ORAL SESSIONS, 3rd March 2020**

Digital Assessment (1)  
e-Learning Experiences  
Game-based Learning & Gamification  
ICT Skills among Teachers (1)  
Lost or found in translation?  
Employability & 21st Century Skills  
Experiences in Maths Teaching  
ICT enhanced Language Teaching and Learning (1)  
Learning Space Design

Digital Assessment (2)  
Training the e-Trainer  
Creativity & Critical Thinking  
ICT Skills among Teachers (2)  
Leadership and Educational Management  
Work-integrated Learning  
Teaching and Learning Mathematics  
Language Learning  
Architecture Education Experiences

Learning Analytics  
Impact of New Technologies on Education  
Flipped Classroom  
ICT Skills among Teachers (3)  
Pedagogical Innovations  
Internships & Workplace Learning  
ICT in Mathematics Education  
ICT enhanced Language Teaching and Learning (2)  
Digital Innovations in Engineering Education

Learning Assessment  
Next Generation Classroom  
Project Based Learning  
Professional Development of Teachers (1)  
Ethical Issues in Education  
Entrepreneurship in Higher Education  
Challenges and Experiences in STEM (1)  
Foreign Language Learning Experiences (1)  
Engineering Education Experiences

Digital Literacy & ICT Skills (2)  
Learning Management Systems (LMS)  
Active Learning  
Professional Development of Teachers (2)  
Gender Issues in Education  
Curriculum Design  
Challenges and Experiences in STEM (2)  
Foreign Language Learning Experiences (2)  
Curriculum Design in Engineering Education

**POSTER SESSIONS, 3rd March 2020**

Emerging Technologies in Education

Pedagogical Innovations and New Educational Trends

**VIRTUAL SESSIONS**

3D Applications and Virtual Reality  
Apps for education  
Augmented Reality  
Barriers to Learning  
Blended Learning  
Collaborative and Problem-based Learning  
Competence Evaluation  
Computer Supported Collaborative Work  
Curriculum Design and Innovation  
Digital divide and access to the Internet  
Diversity issues and women and minorities in science and technology  
E-content Management and Development  
e-Learning  
Education and Globalization  
Education in a multicultural society  
Educational Research Experiences  
Educational Software experiences  
Enhancing learning and the undergraduate experience  
Evaluation and Assessment of Student Learning  
Experiences in Educational/Serious Games  
Experiences in STEM Education  
Flipped Learning  
Gamification  
Impact of Education on Development  
Inclusive Learning  
International Projects  
Language Learning Innovations  
Learning and Teaching Methodologies  
Learning Experiences in Primary and Secondary School  
Lifelong Learning  
Links between Education and Research  
Mobile learning  
New challenges for the Higher Education Area  
New projects and innovations  
Organizational, legal and financial issues  
Pre-service teacher experiences  
Quality assurance in Education  
Research Methodologies  
Research on Technology in Education  
Student and staff mobility programmes  
Student Support in Education  
Technological Issues in Education  
Technology-Enhanced Learning  
Transferring disciplines  
Tutoring and Coaching  
University-Industry Collaboration  
Videos for Learning  
Virtual Universities  
Vocational Training

## ABOUT INTED2020 Proceedings

### HTML Interface: Navigating with the Web browser

This USB Flash drive includes all presented papers at INTED2020 conference. It has been formatted similarly to the conference Web site in order to keep a familiar environment and to provide access to the papers through your default Web browser (open the file named "INTED2020\_Proceedings.html").

An Author Index, a Session Index, and the Technical Program are included in HTML format to aid you in finding conference papers. Using these HTML files as a starting point, you can access other useful information related to the conference.

The links in the Session List jump to the corresponding location in the Technical Program. The links in the Technical Program and the Author Index open the selected paper in a new window. These links are located on the titles of the papers and the Technical Program or Author Index window remains open.

### Full Text Search: Searching INTED2020 index file of cataloged PDFs

If you have Adobe Acrobat Reader version 6 or later ([www.adobe.com](http://www.adobe.com)), you can perform a full-text search for terms found in INTED2020 proceedings papers.

*Important:* To search the PDF index, you must open Acrobat as a stand-alone application, not within your web browser, i.e. you should open directly the file "INTED2020\_FrontMatter.pdf" with your Adobe Acrobat or Acrobat Reader application.

This PDF file is attached to an Adobe PDF index that allows text search in all PDF papers by using the Acrobat search tool (not the same as the find tool). The full-text index is an alphabetized list of all the words used in the collection of conference papers. Searching an index is much faster than searching all the text in the documents.

*To search the INTED2020 Proceedings index:*

1. Open the Search PDF pane through the menu "Edit > Advanced Search" or click in the PDF bookmark titled "SEARCH PAPERS CONTENT".
2. The "INTED2020\_index.pdx" should be the currently selected index in the Search window (if the index is not listed, click Add, locate the index file .pdx, and then click Open).
3. Type the search text, click Search button, and then proceed with your query.

*For Acrobat 9 and later:*

1. In the "Edit" menu, choose "Search". You may receive a message from Acrobat asking if it is safe to load the Catalog Index. Click "Load".
2. A new window will appear with search options. Enter your search terms and proceed with your search as usual.

*For Acrobat 8:*

1. Open the Search window, type the words you want to find, and then click Use Advanced Search Options (near the bottom of the window).
2. For Look In, choose Select Index.
3. In the Index Selection dialog box, select an index, if the one you want to search is available, or click Add and then locate and select the index to be searched, and click Open. Repeat as needed until all the indexes you want to search are selected.
4. Click OK to close the Index Selection dialog box, and then choose Currently Selected Indexes on the Look In pop-up menu.
5. Proceed with your search as usual, selecting other options you want to apply, and click Search.

*For Acrobat 7 and earlier:*

1. In the "Edit" menu, choose "Full Text Search".
2. A new window will appear with search options. Enter your search terms and proceed with your search as usual.



# **TRANSVERSAL POLARISED DISCOURSE ABOUT “IMMIGRATION” THROUGH MULTIPLE SOCIAL MEDIA: TWITTER, FACEBOOK, INSTAGRAM, YOUTUBE**

**Annamaria Silvana de Rosa, Elena Bocci, Marco Salvati, Martina Latini, Mattia Bonito, Nicola Carpignano, Antonio Nubola, Tommaso Palombi, Giampaolo Tovo**

*Sapienza University of Rome (ITALY)*

## **Abstract**

The contribution is part of a wide research program on migratory experiences and discourse, articulated in “field” and “multi-media” studies.

The media studies are aimed at reconstructing the “multi-voices” and “multi-agents” discourses about the contemporary migratory phenomenon: a) the scientific discourse (by experts), b) the political-institutional discourse (by policy makers, political leaders, institutions, NGO, etc.), c) the social discourse by journalists; d) the discourse “for” or “by” lay people.

The research material of the multi-media studies includes 6739 sources - currently increasing with new waves of data collection - based on: a) the international scientific literature, inspired by the social representations theory and other theories in social sciences; b) the discourse driven by or leading the institutional policies (at national and supranational level); c) the discourse by “journalists” in the Italian online press of different political orientation (La Repubblica, Il Fatto Quotidiano, Il Mattino, Libero) and broadcast (SKY Tg24); d) the communication “for” and “among” the citizens in the various scenarios of the social networks (Twitter, Facebook, Instagram, YouTube).

Systematic content, thematic and statistical analyses are based on multidimensional analysis supported by multiple software (IRAMUTEQ for Descending Hierarchical Classification and Specificities and Correspondence Analysis, SPAD for Correspondence Analysis, GraphColl for Network Analysis, Analysis of images and Videos, Sentiment Analysis, etc.).

A selection of the results from the media studies will be presented regarding the communication “for” and “among” the citizens in various scenarios of the social networks (Twitter, Facebook, Instagram, YouTube).

The results selected for this contribution will provide the reconstruction of the social discourse about “immigration-migration” through multiple social media, transversally obtained by multidimensional analyses conducted on 4118 sources related to international and national sources regarding the period 2013-2018, characterised by the different geo-political governmental scenarios: 1958 posts from Twitter, 1197 from Facebook, 456 from Instagram and 507 from YouTube. Cross-results through the four social media show empirical evidence of the consistency of the highly polarised discourse depending on the ideological political positioning of the multi-voices and multi-agents social actors.

The educational relevance of the study based on the construction of a “hot” societal issue through different social networks is in line with recent acquisitions of the “cyber-psychology”. The reflection of the psychology of new media underlines how the hybrid nature of social networks makes them both opportunities and problems in co-building, spreading and sharing knowledge.

This study contributes to educational benefits by providing empirical evidence about the dynamics between communicative engineering and creation/manipulation of the social consensus. It may improve awareness about the role played by the social media as powerful “echo chamber” of the institutional and political discourse leading to opposite inclusive/exclusive policies, and as the environment where it takes place the negotiation and development of polemical social representations around the theme of immigration.

**Keywords:** Social media, multi-agents discourse, immigration, polarised social representations, ideological and political positioning.

## 1 INTRODUCTION

“About 60,000 years ago our sapiens ancestors left Africa (from there we all come, although with the passage of time we are getting a little discoloured...), and one migration after another arrived first in the Middle East and, 20,000 years later in Europe: where 250,000 years before we find the traces of the oldest Neanderthals, arrived also from elsewhere. No European is a European native if we go back far enough in history!” [1]. It is enough to visit Museums of History of cities in old and new continents to be exposed to an impressive history of migrations along millennia: in some cases of “immigration”, in others of “emigration”, finally in others in alternate directions (immigration/migration) depending on the historical circumstances or even with concurrent directions of migratory fluxes of different target groups. [2]. “The history is a history of migrations. And it starts from afar: in prehistory” [1].

Today the technological innovation in the interconnected world at global scale has not eliminated the physical mobility at local, national and transnational level. On the contrary the global interconnection and the communication in real time has multiplied the need and desire for relocation of different length (temporary, long term or permanent/irreversible). If these facts are indisputable, what is surely object of perceptual distortion and ideological polarization is the representation of the figures of the migratory phenomenon in the media and in the multi voice discourse. The perception of the immigrants is almost generally estimated much higher than the Italian emigrants. The diffused perception of the immigrants as the “others”, the “unknown”, “foreign” is often assimilated with “dangerous”, “extraneous” and generally presented in the media as “invaders”, or stigmatized as potential “terrorists”, legitimizing “fear” and evoking the “need for barriers” and protection of the own territory by the population of the host country. On the other side they are perceived as “social victims” and marginalized groups.

The “classification” and “naming” of these groups (out-group or in- group depending on the level of exclusion / inclusion process under the supra-ordered category of humanity) – as essential “anchoring” processes well defined by the social representation theory [3] [4] [5] - are interesting to be studied as social construction, serving more the legitimation of policies and legal status adopted for the social control of the phenomenon than to describe the reality. Findings from many interesting studies on social representations of migrants in the media show the polarised ‘alternative’ representations of “migrants constructed in economic (e.g., as assets to economy) and humanitarian (e.g., as victims) terms in the favourable representations, whereas in the unfavourable ones, migrants were constructed primarily as a threat to the local economy, to security, and to the nation’s culture and existence” [6].

## 2 METHODOLOGY

The contribution is part of a wide research program on migratory experiences and discourse, articulated in “multi-media” and “field” studies (see figure 1). Main objective of the wider research program is to study:

- a) from one side the polarization in the media of social representations and attitudes according to the different ideological positions and identity affiliations, which guide the processes of social inclusion/exclusion towards migrants;
- b) from the other side the multiple experiential dimensions of migrants/refugees themselves and 2<sup>nd</sup> generation of immigrants, host communities and professional caseworkers.

The media studies are aimed at reconstructing the “multi-voices” and “multi-agents” discourses about the contemporary migratory phenomenon: a) the scientific discourse (by experts), b) the political-institutional discourse (by policy makers, political leaders, institutions, NGO, etc.), and c) the social discourse (by journalists and lay people). The research material of the multi-media studies includes 6739 sources - currently increasing with new waves of data collection - based on: a) the international scientific literature, inspired by the Social Representations Theory and other theories in social sciences; b) the discourse driven by or leading the institutional policies (at national and supranational level); c) the discourse by “journalists” in the Italian online press of different political orientation (La Repubblica, Il Fatto Quotidiano, Il Mattino, Libero) and broadcast (SKY Tg24) - currently increasing with data collection on online press in English from other countries -; d) the communication “for” and “among” the citizens in the various scenarios of the social networks (Twitter, Facebook, Instagram, YouTube).




























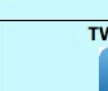




SOURCES OF THE SCIENTIFIC, POLITICAL INSTITUTIONAL and LAY PEOPLE Multi-Agents DISCOURSES on MIGRATION by EXPERTS, POLICY MAKERS, JOURNALISTS AND CITIZENS					
DISCOURSE by ACADEMIC EXPERTS in SCIENTIFIC LITERATURE					
↳ INSPIRED by the SOCIAL REPRESENTATIONS THEORY		↳ INSPIRED by OTHER THEORIES AND DISCIPLINARY APPROACHES OF SOCIAL SCIENCES			
315		161			476*
INSTITUTIONAL AND POLICIES DRIVEN DISCOURSE by national and international Political Institutions, Political Leaders, Religious Authorities, Associations, NGO.....					
					
					
					
					542*
DISCOURSE by JOURNALISTS in ONLINE NEWSPAPERS and MULTI-MEDIA BROADCAST					
					
115	216	229	237	806	1603**
DISCOURSE 'by' and 'for' LAY PEOPLE AND CITIZENS IN SOCIAL MEDIA					
					
1958	1197	456	507		4118**
TOTAL sources updated as * January 2, 2020; ** September, 9 2019					6739

Figure 1. Sources of the scientific, political institutional and lay people multi-agents discourses on Migration

Systematic content, thematic and statistical analyses are based on multidimensional analysis supported by multiple softwares (IRAMUTEQ for Descending Hierarchical Classification and Specificities and Correspondence Analysis, SPAD for Correspondence Analysis, Graph Call for Network Analysis, Analysis of images and Videos, Sentiment Analysis, etc.).

### 3 RESULTS

Among the wider research program, this contribution focuses on the preliminary results obtained through the Social Media Twitter, Facebook, Instagram, YouTube, regarding the communication “for” and “among” the citizens in the various scenarios of the Social Networks.

They results selected for this contribution will provide the reconstruction of the social discourse about “immigration-migration” through multiple social media, transversally obtained by multidimensional analyses conducted on 4218 sources related to international and national sources regarding the period 2013-2018, characterised by the different geo-political governmental scenarios: 1958 posts from Twitted, 1197 form Facebook, 456 from Instagram and 507 from YouTube. Cross-results through the four social media show empirical evidence of the consistency of the highly polarised discourse depending on the ideological political positioning of the multi-voices and multi-agents social actors.

#### 3.1 Twitter as a lens to look at the Social Representations of inclusion/exclusion towards migrants and refugees

The data including 1958 tweets from national and international contexts (967 tweets in Italian and 991 in English) referring to the migratory phenomenon were collected during the academic years 2017-2018 and 2018-2019 (and again improving during the a.y. 2019-20) by university students – organised in various supervised research teams - attending the lab of the course “Social Representation and Communication: “New Media and Web-Marketing” at Sapienza University of Rome,Italy).

The two worksheets in Italian and in English have been categorized according to the variables: a. Tweets: the textual variable which allows to detect the most relevant symbols and social markers (i.e., political, economic, values, ethical, legal, religious markers, etc.); b. year; c. attitude, according to the evaluative component assumed from the discourse; d. followers; e. retweets; f. hashtag (1 Migrant + Migrants, 2 Immigrant + Immigrants, 3 Immigration, 4 Migration + Migration Flows, 5 Refugee, 6 Closed Ports, 7 Open Ports, 8 Displaced, 9 Stop Immigration); g. political temporal frame regarding

the left-wing government and the populist/right-wing government in the two-years period in question in Italy, whilst for the international scenario related in the US there was non political change under the Presidency of Donald Trump, since the date of the oldest tweet (16th June 2017).

After cleaning every tweet text, by removing any lexical form without a proper meaning and removing the symbol '#' from the hashtags, the data organised in two corpora (one for the Italian tweets and one for the English one) were analysed by two Correspondence Analyses through SPAD. [7] [8]

The results show five different factors for the two corpora, indicating both analogies and differences in social representations about migratory phenomenon. They clearly show politicians, groups, organizations, institutions, experts, journalists, leading secular or religious personalities who have piloted and influenced the social representations of inclusion/exclusion towards migrants and refugees in the social network communication.

Coherently with results emerged through other research lines and sources, the results shows the highly polarised social discourse "pro" and "anti" immigration. Data and news are commonly used to support the distinct positions anchored into the metaphors of "open ports" versus "closed ports" leading to opposite policies. On the one hand there is a tendency to evoke the solidarity aspects as an attempt to resolve what is in all respects considered an humanitarian emergency; on the opposite side pressure is being put on the legal, economic and ethnic aspects, on the behalf of own national interests inspired by sovereign ideology.

The positive attitude appears instead strongly linked to the social representations of migrants as "victims"; while the negative attitude corresponds to the social representations of the "executioners" migrants.

An important element in both national and international contexts (in the Italian and English corpora) is the reference to the totalitarian ideologies, used from one side as warming, social reporting tool to face the obstructionism against the migratory phenomenon, while from the other side counterparts cite terrorism and ISIS to manipulate in order to leverage feelings of fear.

Freedom from certain filters allows users to express their contents sincerely, through the use of a language that is direct and openly deployed. This is evidenced by a very polarized discourse on migratory phenomenon that risks simplifying too much an issue that, instead, needs more complex managements and solutions.

In an increasingly digitalised social world, Twitter is confirmed as a powerful "echo chamber" of the institutional and political discourse leading to opposite inclusive/exclusive policies, and as one of the environments where the negotiation and development of polemical social representations around the theme of immigration take place [9] [10] [11].

The choice in our study of 9 hashtags (both topic-based and evaluative) and the retrieval of 1958 Tweets in English and Italian has allowed to detect the multi-perspective agent's controversial social representations, driven by the political positioning and influential leader's discourse inspiration. The results thus enlarge the acquisitions of a previous study - inspired by critical discourse studies [12] [13] and social representations [14] - focused on Twitter users' discursive strategies and semiotic multi-modality resources of anti-refugee discourse on 100 tweets in a 2-days time frame, using a unique evaluative hashtag such as #refugeesnotwelcome, that have shown how Twitter users may connect translocally and align around shared nationalist-conservative and xenophobic right-wing ideologies depicting refugees as unwanted, criminal outsiders [15].

### **3.2 The controversial discourse about 'immigration' through articles by right and left wing political positioning on Facebook**

The sources of the results presented in this paper include the posts, detected from the Facebook platform, selected from 1197 posts, related to the time frame 2014-2018, although the data collection is still in progressive expansion beyond 2018.

The criteria used to select the articles are: 1. topic on immigration; 2. published in 2018; 3. published by the pages of politicians or political parties; 4. belonging to officially deployed newspapers (the deployment of most newspapers was found on the following link: <https://forum.termometropolitico.it/719099-orientamento-politico-dei-quotidiani.html>). The Keywords used for selecting the posts are: migrant, displaced; immigrant, immigrat+; refugee, rifugiato; migration, migrazion+, flussi migratori; immigration, immigrazione, according to the general research plan.

In particular, the 178 sources selected for this contribution (see figure 2) according to the political positioning are the following:

- right wing: 9 articles by Political Parties (Fratelli d'Italia, CasaPound, Forza Nuova); 57 articles by Political Leaders (Matteo Salvini, Giorgia Meloni, Vittorio Sgarbi, Simone Di Stefano et al); 28 articles by online Newspapers (Il Giornale; Il Secolo d'Italia);
- left wing: 25 articles by Political Parties (Partito Democratico, Potere al Popolo, Futura) 26 articles by Political Leaders (Matteo Renzi, Paolo Gentiloni, Maurizio Martina, Laura Boldrini, Nicola Zingaretti, Emma Bonino et Al.) 33 articles by online Newspapers and magazines (Il Fatto Quotidiano, il Manifesto, La Repubblica, L'Espresso, Left).

**Preliminary Results on Left-right discourse selected from 1054 posts via FACEBOOK:**

Selected sources (politically polarized) from 1054 posts Facebook	Articles published by Political Parties	Articles published by Political Parties	Newspaper and magazine Articles	Total
Right wing	9 Fratelli d'Italia CasaPound Forza Nuova	57 Matteo Salvini Giorgia Meloni Vittorio Sgarbi Simone Di Stefano	28 Il Giornale Il Secolo d'Italia il Giornale.it SECOLO	94
Left wing	25 Partito Democratico Potere al popolo Futura	26 Matteo Renzi Paolo Gentiloni Maurizio Martina Laura Boldrini Nicola Zingaretti Emma Bonino Et. Al.	33 Il Fatto Quotidiano Il Manifesto il manifesto La Repubblica L'Espresso Left	84
Total	34	83	61	178

Figure 2. Preliminary results on Left-Right discourse selected from 1054 posts via Facebook.

This contribution refers to the preliminary results on Left-Right wing discourse selected from 1054 posts (2018 year on a total of 1197 including also 2017 year) by using GRAPHColl, a software that allows to evaluate the links between words using certain criteria: distance, frequency, exclusivity, directionality, dispersion and feature films. The evaluation of word links within a corpus is very useful for detecting how within a context some topics are covered.

With the analysis carried out it is possible to see clear differences regarding the topics on which the various sources are focused.

The left-wing positioned articles focus on: European and global cases of border closures and border controls; malfunction of reception centres; events where the coast guard managed to save the migrants and then return them to the centres to allow reception; informing through immigration data and the evolution of its phenomenon in recent years; information on proposals made to improve the world situation.

The right-wing positioned articles see Salvini as the main protagonist and his rhetorical devices in the discourse. In fact the most discussed topics are: events where Salvini is the protagonist, with a big emphasis on "personification" of the political leader; 'no way' core rhetorical argument; connection between mafia ("cosa nostra") and migrants; events where migrants are protagonists of delinquent acts; decrease in landings and acceptance only of "refugees" who already obtained proof of legal status.

In brief the left-wing articles underline the need to respect human rights and therefore to allow reception; to emphasize the commitment of the people who work to allow these rights, to inform about the phenomenon of immigration and the malfunctioning of the reception centres, and any actions that may affect people's lives on the entire planet.

The right-wing articles highlight the commitment of Minister Salvini: to control the arrival of "immigrants", to prevent the criminal acts that the illegal immigrants bring to Italy (including the connection with the mafia), to restrict welcoming people only to legal entries (see figure 3).

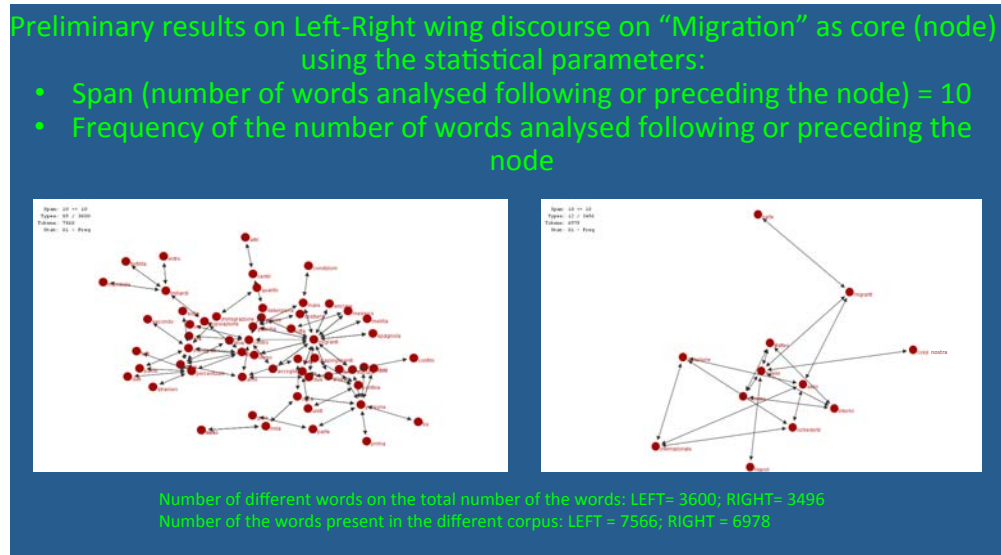


Figure 3. Preliminary results on Left-Right wing discourse on "migration".

### 3.3 The Polarized Social Representations of immigration through the photographic lens of Instagram and its impact

In this contribution we will focus on the textual elements (translated in English, where needed) concerning the hashtags and on iconic elements related to 456 photos - published from 2015 to 2018 (with the data collection currently still increasing beyond 2018). The data have been analysed by Correspondence Analyses through SPAD software [7] [8], including a rich set of categorical active variables both factual elements of textual and iconic nature related to the posts and evaluative elements related to the emotional impact of the message by the research participants involved in this specific data collection.

The results show five different factors, indicating the polarized Social Representations of immigration through the photographic lens of Instagram. In particular, the semantic space organized by the first and second factors clearly shows the contrast between an inclusive/exclusive view expressed towards immigrants/refugee, significantly related to both political leaders and religious authorities, different system of values and human rights conceptions focused on the opposed metaphors of open/closed ports and borders.

Inclusive views appear on the positive semi-axis of the 1st factor, in fact, we find as first word "Pope Francis" followed by "inclusion", "hospitality", "Catholic", close to political-institutional and cultural dimensions characterized by "Sinistra (Left)", "activism", "EU", "welcome", "African Art", "intercampus", "culture", "multicultural", "Human rights", "Amnesty", "community", "do good", "politics, together with other elements evoking geographical elements (Mediterranean) continents, regions and cities (Africa, Costa d'Avorio, Naples, Parma..) and target population politically relevant for the migration issue (Filipino, Syrian crisis, Palestinian...).

This positive semi-axis of the 1st factor is significantly related to the categorical variables: the years 2016 and 2017 as temporal frame; the Italian Prime Ministers Renzi and Gentiloni and to the American President Obama respectively as national/international; the absence of all neutral and negative emotions (surprise, fear, sadness, disgust, anger) and on the contrary, the presence of "joy" aroused by the message; the low impact denoted by the few "likes" and "followers".

Similar views appear on the negative semi-axis of the 2nd factor we find again as first word "Pope Francis" followed by "inclusion", "refugees welcome", "emotions", "Catholic", "antiracism", "no more bombs", "solidarity", "respect", "help", "hospitality", "culture", "multicultural", "share humanity", "education", "soul", "art", "graffiti", "artist", "painting", "learning" again together political-institutional and cultural dimensions characterized by "Sinistra (Left)", "activism", "EU", "children rights", "saving" together metaphor of inclusive process like "open port", "no borders", "no Decreto Salvini" and exemplary island for welcoming immigrants like "Lampedusa" or cities like "Parma città d'asilo".





The "active variables" considered in this contribution are based on factual elements of the YouTube videos: the title of the videos; the number of 'visualisation'; the number of like /dislike; the presence of sub-titles; the relevant comments identified in the YouTube platform; and on the impact and evaluation of the messages by the research participants involved in this specific data collection (12 analysers attending the Laboratory of the New media and Web marketing linked to the course of Social Representations and Communication): impact assessment in terms of 'centrality' and 'relevance' of the message; proposals to modify the message to make it more effectively aimed at the social inclusion of asylum-seeking migrants / refugees.

"Categorical active variables" have been also included both factual and evaluative elements related to the emotional impact of the message: mediator of the message (videos and title); temporal frame: year of publication from 2013 to 2018; national and international political scenario (Presidents of the Council of Ministers of the Italian Republic from Mario Monti, Enrico Letta, Matteo Renzi, Paolo Gentiloni to Giuseppe Conte and American Presidents from Barack Obama to Donald Trump); the geo-political contextualisation and characterisation of the 'source' of the message (text and videos); presence of famous testimonial and endorsers; presence of other protagonists; contextual scenario showed in the videos (urban, naturalistic, institutional/organizational); prevailing dimensions present in the videos (socio-relational, emotional, functional/organizational); prevailing emotions aroused by the videos (surprise, fear, sadness, joy, disgust, anger).

All the "textual active variables" of the videos are currently under analysis of Correspondences by Spad software [7] [8] and in-depth thematic analysis of the videos are also planned.

Preliminary results, based on the analysis of the frequency distribution, show a wide differentiation in the geo-political contextualisation and characterisation of the 'sources' of the messages, including informative, institutional and satirical videos (see table I), from Europe and in particular Italy, and from other continents (in particular from US and different African countries: Niger, Libia, Etiopia, Sudan, Marocco...) whilst there is a strong polarization in terms of the political positioning of the sources.

Table I: Examples of informative, institutional and satirical videos published on YouTube

DIFFERENT TYPOLOGIES OF THE VIDEOS					
Informative videos		Institutional videos		Satirical videos	

Once again, it emerges the focus on the analysis of the communication by the Italian political leader using YouTube as tool of political propaganda, coherently with the results detected through other social media discourses, showing the highest frequency of Salvini as the top word (f= 75) immediately behind the keywords used for the data collection (migrant –migrants-: F= 148, immigrati –immigrants-: F = 79; immigrazione –immigration-: F: 77).

## 4 CONCLUSIONS

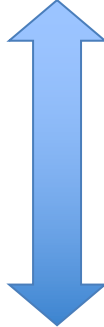
Transversal polarized discourse about "immigration" through multiple social media, oversimplifying the phenomenon, highlight polemical social representations as opposite systems of values and human rights conceptions driven by political positioning:

- Left wing is inspired by solidarity for humanitarian emergency, focusing the target Social Representation (of migrants) as victims, expresses positive emotions like "joy" and metaphor "#open\_ports" as a mirror of inclusive processes (policies);
- Right wing, strongly personified by Italian political Leader Salvini and American leader Trump, is inspired by own national interests (sovereign ideology), focusing the target Social Representation (of immigrants) as executioners (deviant social representation); it expresses negative emotions (like fear, sadness, anger) and metaphor of "#closed\_ports" as a mirror of exclusive processes (policies).



The interrelated elements of the opposite semantic fields driven by political positioning reflect different social practices of inclusion/exclusion, as already documented in the literature as dynamic relationship between social representations and practices [16] (see table II).

Table II: Polemical S.R. and Practices of exclusion/inclusion emerged through multiple social media.

INTERRELATED ELEMENTS OF THE SEMANTIC FIELD	“POLEMICAL SOCIAL REPRESENTATIONS”		
	LEFT WING		RIGHT WING
• FOCUS:	Out-group: Solidarity for humanitarian emergency		In-group: Own national interests
• TARGETS:	Victims		Deviant (invaders, criminal, terrorists....)
• EMOTIONS:	Positive (joy)		Negative (fear, sadness, anger)
• PERSONIFICATION:	No		Political leaders: Salvini/Trump
• METAPHORS:	#openports		#closedports
	INCLUSION	“PRACTICES” driven by POLICIES	EXCLUSION

Once all the descriptive and multidimensional analyses will be concluded both at the level of each research line and at the multi-level cross-analysis of the results based on the multiple research lines, our research program will contribute to further comprehension of the dynamic between social representations, mediated by multi-channel communication, embedded in social practices and policies oriented to social inclusion/exclusion in relation to contemporary migratory phenomena, looking at the intersection of the social representations shaped by different multi-voices and multi-agents discourse (scientific, institutional, lay people) and experiential narratives by different target populations of the involved actors (young immigrants of second generation, adult immigrants/refugees, professional social workers and host communities). Finally, some visionary intuitions [17] about the “cyber-representations” are actualised in our results in time that social representation theory - disseminated worldwide, well beyond Europe as its “homeland” [5] - is recognised as a suitable theoretical lens to capture the nature of the phenomenon of social media use and micro-blogging in Government 2.0 from the citizens’ perspective, as shown in the research conducted in China [18].

The educational relevance of the study based on the construction of a “hot” societal issue through different social networks is in line with recent acquisitions of the “cyber-psychology”. The reflection of the psychology of new media underlines how the hybrid nature of social networks makes them both opportunities and problems in co-building, spreading and sharing knowledge. [19]

This study contributes to educational benefits by providing empirical evidence about the dynamics between communicative engineering and creation/manipulation of the social consensus [20], [21]. It may improve awareness about the role played by the social media as powerful “echo chamber” of the institutional and political discourse leading to opposite inclusive/exclusive policies, and as the environment where it takes place the negotiation and development of polemical social representations around the theme of immigration. [22], [23].

## ACKNOWLEDGEMENTS

This article has been developed within interdisciplinary research activities focused on the theme of migratory flows and inclusive practices in Europe and Italy at the Department of Social and Developmental Psychology at Sapienza University of Rome, selected in 2017 as department of excellence by the M.I.U.R. (Italian Ministry of University and Research).

## REFERENCES

- [1] S. Allievi, *Immigrazione. Cambiare tutto*. Bari: Laterza, 2018.

- [2] A.S. de Rosa, E. Bocci, M. Latini, S. Balbutin and Silvestri, Controversial social representations about migrants from multi-voice and multi-agent (scientific, institutional and lay people) discourses and immigrant's experiences, In I. Bondarevskaya, A. De Carlo Eds, *Political and Economic Self-Constitution: Media, Citizenship Activity and Political Polarization*, (pp.92-100) Padua, TPM Editions, 2019.
- [3] S. Moscovici, *La psychanalyse son image et son public. Etude sur la représentation sociale de la psychanalyse*. Paris: Presses Universitaires de France, 1961/1976.
- [4] A.S. de Rosa, "Taking stock: a theory with more than half a century of history. Introduction" in *Social Representations in the "social arena"* (A.S. de Rosa ed.), New York, London, U.S.A./U.K.: Routledge, 2013.
- [5] A. S. de Rosa, E. Bocci, and L. Dryjanska, "The Generativity and Attractiveness of Social Representations Theory from Multiple Paradigmatic Approaches in Various Thematic Domains: An Empirical Meta-theoretical Analysis on Big-data Sources from the Specialised Repository "SoReCom 'A.S. de Rosa' @-library"," *Papers On Social Representations*, 27(1), 6-1, 2018 Retrieved from doi: <http://psr.iscte-iul.pt/index.php/PSR/index>.
- [6] I. Kadianaki, M. Avraamidou, M. Ioannou, and E. Panagiotou, "Understanding Media Debate Around Migration: The Relation Between Favorable and Unfavorable Representations of Migration in the Greek Cypriot Press. Peace and Conflict," *Journal of Peace Psychology*, 24(4), 407-415, 2018. <https://doi.org/10.1037/pac0000285>
- [7] L. Lebart, A. Morineau, and M. Bécue, *Spad.T Systeme Portable pour l'Analyse des Donnees Textuelles [Spad.T.Portable System for Textual Data Analysis]* Paris: Cisia, 1989.
- [8] L. Lebart, A. Morineau, and M. Piron, *Statistique exploratoire multidimensionnelle [Multidimensional exploratory statistics]*. Paris: Dunod, 2000.
- [9] Y. Mejova, I. Weber, and M. W. Macy (Eds.). *Twitter: a digital socioscope*. Cambridge: Cambridge University Press, 2015.
- [10] F. Ruggiano, "Il migrante immaginario. Analisi di una rappresentazione sociale attraverso Twitter," *Imago Journal*, 2016 Retrieved from <http://www.imagojournal.it>; doi: 10.7413/22818138067.
- [11] D. Murphy, *Twitter. Social Communication in the Twitter era*. 2nd Ed. (1st Ed., 2013), Cambridge: Polity Press, 2018.
- [12] T.A. Van Dijk, "Critical discourse studies: A socio-cognitive approach" in *Methods of Critical Discourse Analysis*. (R. Wodak and M. Meyer eds.), pp. 62–85 London: SAGE, 2009.
- [13] T.A. Van Dijk, "Discourse and ideology" in *Discourse Studies: A Multidisciplinary Introduction*. (T.A. Van Dijk ed.), pp. 379–407 London: SAGE, 2011.
- [14] C. A. Howarth, "Social representation is not a quiet thing: Exploring the critical potential of social representations theory," *British Journal of Social Psychology*, 45(1): 65–86, 2006. <https://doi.org/10.1348/014466605X43777>.
- [15] R. Kreis, "#refugeesnotwelcome: Anti-refugee discourse on Twitter," *Discourse & Communication*, 11(5), 498–514, 2017. Retrieved from: <https://doi.org/10.1177%2F1750481317714121>
- [16] A.S. de Rosa, E. Bocci, and P. Portino, "Identikit of vegan and vegetarian's social representations and social eating practices through field study, traditional media and web2.0 user-generated content studies in four geo-cultural contexts," 13th annual International Technology, Education and Development Conference, INTED2019 (Valencia, March 11th-13th, 2019) in *Inted 2019 Proceedings*, pp. 2122-2131, 2019 Madrid: INTED Publications, 2019.
- [17] S. Moscovici, Vygotsky, "Le Grand Robert et la cyber-representation," *Cahiers Internationaux de Psychologie Sociale*, 28, 15-21, 1995.
- [18] B. Lu, S. Zhang, and W. Fan, "Social representations of social media use in Government: an analysis of Chinese Government microblogging from citizens' perspective," *Social Science Computer Review*, 34(4), 416-436, 2015. <https://doi.org/10.1177/0894439315595222>.
- [19] G. Riva *I social networks*, Bologna: Il Mulino, 2010, 2<sup>nd</sup> ed. 2016.
- [20] P. Calzeroni *Narcisismo Digitale. Critica dell'intelligenza collettiva nell'era del capitalism della sorveglianza*, Milano: Mimemsis, 2019

- [21] G. Riva, *Fake news*, Bologna: Il Mulino, 2018.
- [22] P. Cardon, "Book Review" of D. Murthy (2018) "Twitter: Social Communication in the Twitter era" (<https://doi.org/10.1177/1461444819831987>), *New Media and Society*, 21, 7: 1656-1658, 2019.
- [23] A.S. de Rosa, E. Bocci, M. Salvati M. Bonito, "Twitter as 'echo chamber' of polarized social representations about the (im)migration issue: the controversial discourse in the Italian and international political frame" (2020, *forthcoming*)